



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Junming Le, Jan Vilcek, Peter Daddona, John Ghrayeb, David Knight and  
Scott Siegel

Application No.: 10/043,436                      Group: 1644

Filed: January 10, 2002                      Examiner: Phillip Gambel

Confirmation No.: 3843

For: METHODS OF TREATING HEPATITIS WITH CHIMERIC ANTI-TNF  
ANTIBODIES

<b>CERTIFICATE OF MAILING OR TRANSMISSION</b>	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or is being facsimile transmitted to the United States Patent and Trademark Office on:	
4-7-05	<i>Dawn M Myers</i>
Date	Signature
<i>Dawn M Myers</i>	
Typed or printed name of person signing certificate	

DECLARATION OF JAN VILCEK, M.D.  
UNDER 37 C.F.R. § 1.132

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Jan Vilcek, M.D., of 920 5th Avenue New York, NY 10021, U.S.A., declare that:

1. I am a co-inventor of the subject matter described and claimed in the subject application (United States Patent Application Serial No. 10/010,229, filed December 7, 2001). The subject application was filed on behalf of New York University, 550 First Avenue, Rm. MSB153, New

York, NY 10016, U.S.A., and Centocor, Inc., 200 Great Valley Parkway, Malvern, PA, 19355-1307, U.S.A.

2. I received my M.D. degree from Comenius University Medical School, Bratislava, Czechoslovakia in 1957. I received my C.Sc. (Ph.D. equivalent) degree in Virology from the Institute of Virology, Czechoslovak Academy of Science, Bratislava, Czechoslovakia in 1962. A copy of my curriculum vitae, which describes my educational and professional experience, is attached.

3. I have been employed at New York University since 1965. My current position is Professor in the Department of Microbiology.

4. I have read the above-identified patent application and the presently pending claims. I have also read the Office Action dated October 7, 2004.

5. I note that the Examiner stated in the Office Action, dated October 7, 2004, that in order to satisfy the enablement requirement, the cA2 antibody is required to be known and readily available to the public or obtainable by a repeatable method set forth in the specification. I also understand that the deposit of the cell line is not required where the required biological materials can be obtained from publicly available material with only routine experimentation and a reliable screening test.

The present patent application enables one of skill in the art to carry out the claimed invention and would also enable human and humanized anti-TNF antibodies or antigen-binding fragments thereof. The cA2 antibody is derived from the A2 antibody. The A2 antibody was readily available to the public on the priority date of the instant patent application, March 18, 1991, and was continuously readily available to the public thereafter. On that date, New York University had a general policy of furnishing third parties with a sample of the A2 antibody,

should that third party wish to carry out experiments using the A2 antibody. I have provided antibodies to researchers who requested them. For example, in a letter to me dated March 19, 1992, Dr. Vladimir Lackovic, who was, at the time, at the Institute of Virology in Bratislava (now Slovakia), requested antibodies to tumor necrosis factor (TNF). I replied to Dr. Lackovic in a letter dated April 19, 1992, stating that I sent him monoclonal antibodies to tumor necrosis factor alpha (TNF- $\alpha$ ). These antibodies were A2 antibodies. A copy of my letter is attached as Exhibit A. Exhibit B is a translation of Exhibit A. These Exhibits clearly indicate that Applicants made the A2 antibody readily available to the public.

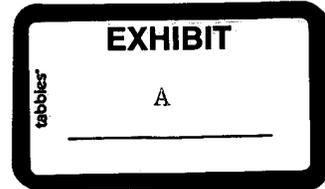
6. I declare that all statements made in this Declaration of my own knowledge are true and that all statements made on information and belief are believed to be true. Moreover, these statements are made with the knowledge that willful false statements and the like made by me are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. I attest that I translated Exhibit A from the Slovak language to English and that the translation of the Exhibit is true and accurate.



Jan Vilcek, M.D.

4/5/05  
Date

Attachments  
Curriculum vitae  
Exhibits A and B



Department of Microbiology  
550 First Avenue, New York, NY 10016

Tel: (212) 263-5315

Fax: (212) 263-8276

Jan Vilček, M.D.  
Professor

New York, 19. 4. 1992

Milý Vlado,

Tvoj list sa sem konečne zatúlal -  
nebol poslaný ležsky (ste na tom finančne  
už tak zle, že 1 Kčs rozdiel v poštovnom  
brá úlohu?) a tunajší poštári asi mali  
problém vyľúštiť adresu, hoci bola správna!

Ines sme Ti poslali Mab proti TNF- $\alpha$ .  
Poslali sme zatiaľ pool média z hybridómových  
kultúr (nepurifikovaný a nekonzentrováný).  
V nezriedenej forme neutralizuje aspoň  
5 ng/ml TNF- $\alpha$  a tak na antivirálnu po-  
kusy o ktorých píšeš by to malo stačiť.  
Ak chceš môžeme poslať aj purifikovaný  
IgG.

Samozerejme, že by som sa veľmi rád možnosti  
ďalšej spolupráce. Mali by ste záujem pripraviť  
MAb proti proteínu ~~██████████~~ ~~██████████~~ ktorý  
sme izolovali v našom laboratóriu? Príkla-  
dne informácie o ~~██████████~~. Medzitým sme

ho vyprodukovali v insektových kultúrach  
a máme ho vypurifikovaný. Viem že existu-  
jú mechanizmy ako pre takito spoluprácu  
získať peniaze od NIH. Čo si o tom myslíš?

Mnoho pozdravov Tebe a Lacovi.

Srdcenne



TRANSLATION OF LETTER FROM  
JAN VILCEK TO VLADIMIR LACKOVIC  
DATED: APRIL 19, 1992

Translated by Dr. Jan Vilcek

Dear Vlado,

Your letter has finally arrived here, it was not sent by air mail (are you so poor that a difference of one Kcs plays a role?) and the postman here probably had a problem deciphering the address even though it was correct!

Today we sent you mAbs against TNF- $\alpha$ . We have sent you so far a pool of media from hybridoma cultures (unpurified and unconcentrated). In undiluted form it neutralizes at least 5 ng/ml of TNF- $\alpha$  and so it should be sufficient for the antiviral experiments you mentioned. If you wish we can also send you purified IgG.

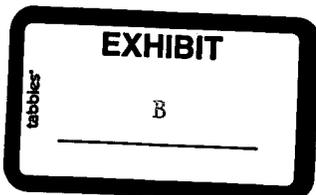
Of course, I would welcome a possibility of a further collaboration. Would you be interested in the preparation of mAb against the protein [redacted] which we isolated in our laboratory? I am attaching information about [redacted]. In the meantime, we produced it in insect cultures and we have it purified. I know that there are mechanisms of how to obtain money for such collaboration from the NIH. What do you think about this?

Best regards to you and Laco.

Cordially,

Jan

@PFDesktop\::ODMA/MHODMA/HBSR05;iManage;508918;1



## **CURRICULUM VITAE**

### **Jan T. Vilcek**

Home Address: 920 Fifth Avenue, New York, NY 10021

Date and Place of Birth: June 17, 1933; Bratislava, Czechoslovakia

Education:

Comenius University Medical School, Bratislava; M.D., 1957

Institute of Virology, Czechoslovak Academy of Sciences, Bratislava; C.Sc.  
(equivalent to Ph.D.), 1962

Professional Positions and Appointments:

1973 - present	Professor of Microbiology New York University School of Medicine
1983 - present	Head, Cytokine Research Unit, New York University School of Medicine
2000 - present	Microbiology Course Director New York University School of Medicine
1987 - 1997	Co-Director, Cancer Center Core Clinical (BRM) Laboratory, New York University Medical Center
1984-1993	Director, Microbiology Graduate Training Program, New York University School of Medicine
1968-1973	Associate Professor of Microbiology New York University School of Medicine
1968-1973	US Public Health Service Research Career Development Award
1965-1968	Assistant Professor of Microbiology New York University School of Medicine
1962-1964	Head of Laboratory, Institute of Virology Czechoslovak Academy of Sciences, Bratislava
1959-1962	Fellow of the Czechoslovak Academy of Sciences, Bratislava
1957-1959	Research Associate Inst. of Virology, Czechoslovak Academy of Sciences, Bratislava

Honors:

Recognition Award, Japanese Inflammation Society, 1989  
Outstanding Investigator Grant, National Cancer Institute, 1991  
Elliott Osserman Award in Cancer Research, 1996  
Fellow of the American Association for the Advancement of Science, 1997  
Distinguished Alumnus Award and Medal, Comenius University, Bratislava, 2001  
Biotechnology Achievement Award, NYU School of Medicine, 2002  
Honorary Lifetime Membership Award of the International Cytokine Society, 2003  
Honorary Membership, International Society for Interferon & Cytokine Research, 2003  
Included in ISI Highly Cited among 250 most highly cited authors in Immunology category  
Presidential Citation of New York University for contributions to NYU Medical School, 2004

Editorial Activities:

Editor-in-Chief, Archives of Virology, 1975-1984  
 Associate Editor, Archives of Virology, 1985-1991  
 Associate Editor, Virology, 1977-1979  
 Associate Editor, Interferon (Academic Press), 1979-1988  
 Associate Editor, Journal of Interferon and Cytokine Research, 1980-present  
 Associate Editor, Applied Biochemistry and Biotechnology, 1981-1986  
 Associate Editor, Infection and Immunity, 1983-1985  
 Associate Editor, Antiviral Research, 1984-1988  
 Associate Editor, Natural Immunity and Cell Growth Regulation, 1985-1992  
 Associate Editor, Journal of Immunological Methods, 1986-present  
 Associate Editor, Journal of Immunology, 1987-1989  
 Associate Editor, Lymphokine and Cytokine Research, 1987-1994  
 Advisory Editorial Board member, ISI Atlas in Science: Immunology, 1987-1989  
 Editorial Board member, Journal of Biological Chemistry, 1988-1990  
 Section Editor, Aging: Immunology and Infectious Disease, 1988-1995  
 Editorial Board member, Journal of Cellular Physiology, 1988-present  
 Advisory Editorial Board member, Cytokine, 1989-present  
 Editorial Board member, Biologicals, 1989-1995  
 Editorial Board member, Acta Virologica, 1991-present  
 Associate Editor, International Archives of Allergy and Immunology, 1992-1997  
 Editorial Board member, Cellular Immunology, 1992-1996  
 Editorial Board member, Folia Biologica (Prague), 1993-present  
 Contributing Editor, Journal of Inflammation, 1994-1998  
 Editor-in-Chief, Cytokine and Growth Factor Reviews, 1995-present  
 Editorial Board member, Cytokines, Cellular & Molecular Therapy, 1998-present

Selected National and International Committees:

American Cancer Society Advisory Committee on Microbiology and Virology,  
 Member 1981-1984; Chairman 1984

American Cancer Society Advisory Committee on Interferon, 1984-1988

WHO Committee on Interferon Nomenclature, Member 1979-1985,  
 Chairman 1981-1985

WHO Consultant on biological standardization, 1978-1989

Scientific Advisory Board, Max-Planck-Institute for Biochemistry,  
 Munich, German Federal Republic, 1987-1995

International Advisory Board, Czech Immunological Society, 1991-present

Member, American Heart Association Fellowship Review Committee, 1992-1994

Member, Israel Cancer Research Fund Scientific Review Panel, 1993-1996

National Cancer Institute Cancer Center and Research Programs Review  
 Committee (Subcommittee C), 1994

National Cancer Institute Scientific Review Group, Subcommittee C, 1997

Morehouse School of Medicine/ Univ. of Alabama Cancer Center External Advisory  
 Committee, 2001-present

Recent Medical School and University Committees:

President's Committee on Sponsored Research  
 University Committee on Institutional Responsibility  
 University Confidentiality Issues Committee  
 Medical School Technology Transfer and Patents Committee  
 General Clinical Research Center Executive Advisory Committee  
 School of Medicine Grievance Committee  
 School of Medicine Committee on Conflict of Interest (Chairman)  
 Center for AIDS Research Advisory Board

Membership in Professional Societies:

American Society for Microbiology  
 American Association for the Advancement of Science (Fellow)  
 American Association of Immunologists  
 International Society for Interferon and Cytokine Research  
 Czech Immunological Society  
 International Cytokine Society (President, 1997-98)  
 Czechoslovak Society for Microbiology

Books Edited:

Regulatory Functions of Interferon. New York Academy of Sciences, 1980  
 (edited with T.C. Merigan and I. Gresser)  
  
 The Clinical Potential of Interferons. University of Tokyo Press, 1982  
 (edited with R. Kono)  
  
 Interferons and the Immune System. Elsevier, 1984 (edited with E. De Maeyer)  
  
 Tumor Necrosis Factors: Structure, Function, and Mechanisms of Action.  
 Marcel Dekker, Inc., 1991 (edited with B.B. Aggarwal)  
  
 Cytokine Reference. Academic Press, 2000  
 (edited with J.J. Oppenheim, M. Feldmann *et al.*)

Major Conferences Organized:

New York Heart Association Symposium on Interferon, New York, 1969  
  
 New York Academy of Sciences Conference "Regulatory Functions of Interferons",  
 New York, 1979 (co-chaired with Ion Gresser and Thomas C. Merigan)  
  
 Congress on Cytokine Research, Boston, 1986 (co-chaired with Stanley Cohen)  
  
 Second Congress on Cytokine Research and Growth Factors, Philadelphia, 1987  
 (co-chaired with Stanley Cohen and Renato Baserga)  
  
 Seventh International Lymphokine Workshop, San Antonio, 1990  
 (co-chaired with Lawrence Lachman and William Farrar)  
  
 Seventh Annual Conference of the International Cytokine Society, Hilton Head, SC,  
 1999 (co-chaired with Bruce Beutler, Scott Durum and Ann Richmond)  
  
 Cytokine-Regulated Gene Expression at the Crossroads of Innate Immunity, Inflammation  
 and Fertility. New York, NY, 2003 (co-chaired with Bruce Cronstein and Tibor Glant)

Current Teaching Activities:

Microbiology Course for medical and graduate students (Course Director and lecturer)  
 Immunology Course for medical students (lecturer)  
 Immunology Course for graduate students (lecturer)  
 Foundations in Cell and Molecular Biology Course for graduate students (lecturer)

Graduate Students and Fellows:

Ph.D. thesis advisor to 29 students who completed their doctorates  
 between 1971-2000.

Past students and fellows include: Toby Rossman, Mun H. Ng, Douglas R. Lowy, Brian Berman, Masayoshi Kohase, Edward A. Havell, Shudo Yamazaki, Paul Anderson, Teresa G. Hayes, Masafumi Tsujimoto, Rena Feinman, Vito J. Palombella, Jian-Xin Lin, Yihong Zhang, Luiz F. L. Reis, Tae Ho Lee, Jedd D. Wolchok, Gene W. Lee, Peter J. Sciavolino, Ryutaro Kamijo, Igor C. Oliveira, Deborah Shapiro, Lidija Klampfer, Anne Altmeyer, Ilja Vietor, Paul Schwenger, John Gerecitano, Adam R. Goodman, David M. Poppers and Deborah Alpert.

U.S. Patents:

4,460,685	Method of enhancing the production of human $\gamma$ interferon
4,666,865	Immunoassay for biologically active human interferon-gamma employing unique monoclonal antibodies
4,835,256	Human gamma interferon polypeptide having glutamine as the ninth n-terminal amino acid
5,386,013	Tumor necrosis factor-induced protein TSG-6
5,426,181	DNA encoding cytokine-induced protein, TSG-14
5,656,272	Methods of treating TNF- $\alpha$ -mediated Crohn's disease using chimeric anti-TNF antibodies
5,698,195	Methods of treating rheumatoid arthritis using chimeric anti-TNF antibodies
5,846,763	DNA encoding tumor necrosis factor stimulated gene 6 (TSG-6)
5,919,452	Methods of treating TNF- $\alpha$ -mediated disease using chimeric anti-TNF antibodies
6,210,905 B1	Tumor necrosis factor stimulated gene 6 (TSG-6) binding molecules
6,277,969 B1	Anti-TNF antibodies and peptides of human tumor necrosis factor
6,284,471	Anti-TNF $\alpha$ antibodies and assays employing anti-TNF $\alpha$ antibodies
6,313,091	Pharmaceutical compositions containing TSG-6 for treating inflammatory diseases and cancer-related pathologies
6,518,401 B2	Tumor necrosis factor stimulated gene 6 (TSG-6) protein
6,790,444	Anti-TNF antibodies and peptides of human tumor necrosis factor

Publications:

1. Vilcek, J., Mayerova, A., Mayer, V. and Kociskova, D.: On the incidence and methods of assay of adenoviruses. *Cas. Lek. Ces.* 714-717, 1959 (in Slovak).
2. Vilcek, J. and Mayer, V.: Use of tissue culture in medical virology. *Lek. Obzor.* 8, 321-329, 1959 (in Slovak).
3. Libikova, H. and Vilcek, J.: A simple neutralization test for viruses of the tick-borne encephalitis group, depending on a complete cytopathic effect in HeLa cells. (Preliminary Report). *Acta. Virol.* 3, 181-183, 1959.
4. Mayer, V., Mayerova, A. and Vilcek, J.: Some aspects of the use of a transformed line of human amniotic cells in virological work. *Acta. Virol.* 3, (Supplem.) 51-54, 1959.
5. Libikova, H. and Vilcek, J.: Assay of the tick-borne encephalitis virus in HeLa cells. I. Cytopathic effect and metabolic inhibition. *Acta. Virol.* 4, 165-172, 1960.
6. Vilcek, J.: Interference between tick-borne encephalitis and Western equine encephalomyelitis viruses in chick embryo tissue cultures. *Acta. Virol.* 4, 308-310, 1960.
7. Vilcek, J.: An interferon-like substance released from tick-borne encephalitis virus-infected chick embryo fibroblast cells. *Nature (London)* 187, 73-74, 1960.
8. Libikova, H., Blaskovic, D., Vilcek, J., Rehacek, J., Gresikova, M., Macicka, O., Ernek, E. and Mayer, V.: Incidence of antibodies against tick-borne encephalitis virus in man and domestic animals in a small village in a natural focus. *J. Hyg. Epidem. Microbiol. Immunol. (Prague)* 4, 327-332, 1960.
9. Libikova, H. and Vilcek, J.: Assay of the tick-borne encephalitis virus in HeLa cells. II. Neutralization tests using the cytopathic and metabolic inhibition effects. *Acta Virol.* 5, 379-385, 1961.
10. Vilcek, J.: Studies on an interferon from tick-borne encephalitis virus-infected cells (IF). I. Appearance of IFN in infected chick embryo cell cultures. *Acta Virol.* 5, 278-282, 1961.
11. Zemla, J. and Vilcek, J.: Studies on an interferon from tick-borne encephalitis virus-infected cells (IF). II. Physical and chemical properties of IF. *Acta Virol.* 5, 367-372, 1961.
12. Zemla, J. and Vilcek, J.: Concentration and partial purification of an interferon. *Acta Virol.* 5, 129, 1961.
13. Mayer, V., Zemla, J. and Vilcek, J.: A method for the production of an interferon in chick embryo cells. *Acta Virol.* 5, 130, 1961.
14. Mayer, V., Sokol, F. and Vilcek, J.: Effect of interferon on the infection with Eastern equine encephalomyelitis (EEE) virus and its ribonucleic acid (RNA). *Acta Virol.* 5, 264, 1961.
15. Vilcek, J. and Rada, B.: Studies on an interferon from tick-borne encephalitis virus-infected cells (IF). III. Antiviral action of IF. *Acta Virol.* 6, 9-16, 1962.
16. Vilcek, J.: Studies on an interferon from tick-borne encephalitis virus-infected cells (IF). IV. Comparison of IF with interferon from influenza virus-infected cells. *Acta Virol.* 6, 144-150, 1962.

17. Mayer, V., Sokol, F. and Vilcek, J.: Infection of interferon treated cells with Eastern equine encephalomyelitis virus and its ribonucleic acid. *Virology* 15, 359-362, 1962.
18. Vilcek, J.: Interferon from tick-borne encephalitis virus-infected cells. Publishing House of the Slovak Acad. Sci., Bratislava 1962 (in Slovak).
19. Vilcek, J. and Rada, B.: Appearance of an interferon in tick-borne encephalitis virus-infected chick embryo cell cultures and its action on various viruses. In: *Biology of Viruses of the Tick-borne Encephalitis Complex. Proceedings of a Symposium*, pp. 118-122, Czechoslovak Acad. Sci., Praha and Academic Press, Inc., 1962.
20. Zemla, J. and Vilcek, J.: Physical and chemical properties of an interferon from tick-borne encephalitis virus-infected chick embryo cells. In: *Biology of Viruses of the Tick-borne Encephalitis Complex. Proceedings of a Symposium*, pp. 124-127, Czechoslovak Acad. Sci., Praha and Academic Press, Inc., 1962.
21. Libikova, H. and Vilcek, J.: Metabolic inhibition test for the tick-borne encephalitis complex viruses. In: *Biology of Viruses of the Tick-borne Encephalitis Complex. Proceedings of a Symposium*, pp. 212-214, Czechoslovak Acad. Sci., Praha and Academic Press, Inc., 1962.
22. Manolova, N., Gresikova, M., Vilcek, J., Stefanova, Z., Panayotov, P. and Rusakyevev, M.: Virological studies of the natural foci of tick-borne encephalitis (TE) in Bulgaria. I. Attempts to isolate TE virus from ticks, small rodents and birds in a natural focus in Bulgaria. *Bull. Inst. Microbiol. (Sofia)* 14, 51-54, 1962 (in Russian).
23. Gresikova, M., Rehacek, J., Andonov, P., Vilcek, J., Velichkov, V., Pavlov, P., Macicka, O., Stefanova, Z., Manolova, N. and Rusakyevev, M.: Assay of neutralization antibodies in man and domestic animals in a natural focus of tick-borne encephalitis in Bulgaria. *Bull. Inst. Microbiol. (Sofia)* 14, 63-67, 1962 (in Russian).
24. Vilcek, J.: Studies on an interferon from tick-borne encephalitis virus-infected cells. V. Failure of thermally inactivated virus to induce or to influence interferon formation. *Acta Virol.* 7, 107-115, 1963.
25. Vilcek, J. and Stancek, D.: Formation and properties of interferon in the brain of tick-borne encephalitis virus-infected mice. *Acta Virol.* 7, 331-338, 1963.
26. Vilcek, J. and Stancek, D.: Unresponsiveness to the action of interferon developed in persistently infected L cells. *Life Sciences* 2, 895-901, 1963.
27. Vilcek, J.: Interferon: its formation, properties and significance in various types of interaction between viruses and cells. *Uspekhi Sovrem. Biol.* 55, 391-410, 1963 (in Russian).
28. Szanto, J., Albrecht, P. and Vilcek, J.: Investigations on latent infections in the HeLa cell - Newcastle disease virus system. *Acta Virol.* 7, 297-307, 1963.
29. Albrecht, P., Vilcek, J. and Mayer, V.: The process of multiplication of the tick-borne encephalitis virus in sensitive cells. *Bratislavske Lek. Listy* 43, 88-96, 1963 (in Slovak).
30. Sokol, F., Neurath, A.R. and Vilcek, J.: Formation of incomplete Sendai virus in embryonated eggs. *Acta Virol.* 8, 59-67, 1964.
31. Vilcek, J., Tomisova, J., Sokol, F. and Hana, L.: Concentration and partial purification of interferon from mouse brains. *Acta Virol.* 8, 76-79, 1964.

32. Vilcek, J.: Production of interferon by newborn and adult mice infected with Sindbis virus. *Virology* 22, 651-652, 1964.
33. Vilcek, J.: Use of interference for the assay of group B arboviruses in chick embryo cells. *Acta Virol.* 8, 417-423, 1964.
34. Vilcek, J.: Interferon. In: Great Medical Encyclopedia, Second Ed., Vol. 36 (Supplement), pp. 479-485. Soviet Academy of Medical Sciences, Moscow 1964 (in Russian).
35. Stancek, D. and Vilcek, J.: The role of interferon in tick-borne encephalitis virus-infected L cells. I. Acute infection. *Acta Virol.* 9, 1-8, 1965.
36. Stancek, D. and Vilcek, J.: The role of interferon in tick-borne encephalitis virus-infected L cells. II. Persistent infection. *Acta Virol.* 9, 9-17, 1965.
37. Vilcek, J.: Interferon, tumor viruses and tumor cells. In: Viruses, Cancer, Immunity, pp. 196-205. Medgiz, Moscow, 1965 (in Russian).
38. Vilcek, J. and Freer, J.H.: Inhibition of Sindbis virus plaque formation by extracts of *Escherichia coli*. *J. Bacteriol.* 92, 1716-1722, 1966.
39. Vilcek, J. and Lowy, D.R.: Interaction of interferon with chick embryo cells. *Archiv. Ges. Virusforsch.* 21, 253-264, 1967.
40. Vilcek, J. and Ng, M.H.: Potentiation of the action of interferon by extracts of *Escherichia coli*. *Virology* 31, 552-555, 1967.
41. Friedman-Kien, A.E. and Vilcek, J.: Induction of interference and interferon synthesis by non-replicating molluscum contagiosum virus. *J. Immunol.* 99, 1092-1098, 1967.
42. Vilcek, J., Ng, M.H. and Rossmann, T.G.: Studies on the action of interferon in cellular and cell-free systems. In: The Interferons. G. Rita (ed.), Academic Press, Inc., pp. 185-196, 1968.
43. Vilcek, J., Ng, M.H., Friedman-Kien, A.E. and Krawciw, T.: Induction of interferon synthesis by synthetic double-stranded polynucleotides. *J. Virol.* 2, 648-650, 1968.
44. Jahiel, R.I., Vilcek, J., Nussenzweig, R. and Vanderberg, J.: Interferon inducers protect mice against *Plasmodium berghei* malaria. *Science* 161, 802-804, 1968.
45. Jahiel, R.I., Nussenzweig, R.S., Vanderberg, J. and Vilcek, J.: Antimalarial effect of interferon inducers at different stages of development of *Plasmodium berghei* in the mouse. *Nature* 220, 710-711, 1968.
46. Robinson, H.J., Jr., Prose, P.H., Friedman-Kien, A.E., Neistein, S. and Vilcek, J.: The molluscum contagiosum virus in chick embryo cell cultures: An electron microscopic study. *J. Invest. Dermatol.* 52, 51-56, 1969.
47. Vilcek, J.: Interferon. *Virology Monographs*, Vol. 6, Springer-Verlag, New York, 1969.
48. Jahiel, R.I., Nussenzweig, R.S., Vilcek, J. and Vanderberg, J.: Protective effect of interferon inducers on *Plasmodium berghei* malaria. *Am. J. Trop. Med. Hyg.* 18, 823-835, 1969.
49. Prose, P.H., Friedman-Kien, A.E. and Vilcek, J.: Molluscum contagiosum virus in adult human skin cultures: An electron microscopic study. *Am. J. Path.* 55, 349-357, 1969.

50. Vilcek, J., Rossman, T.G. and Varacalli, F.: Differential effects of actinomycin D and puromycin on the release of interferon induced by double-stranded RNA. *Nature* 222, 682-683, 1969.
51. Rossman, T.G. and Vilcek, J.: Influence of the rate of cell growth and cell density on interferon action in chick embryo cells. *J. Virol.* 4, 7-11, 1969.
52. Vilcek, J. and Jahiel, R.I.: Action of interferon and its inducers against nonviral infectious agents. *Arch. Intern. Med.* 126, 69-77, 1970.
53. Vilcek, J.: Cellular mechanisms of interferon production. *J. Gen. Physiol.* 56(2), 76s-89s, 1970.
54. Vilcek, J., Rossman, T.G. and Friedman-Kien, A.E.: Blocking of interferon action by a component of animal serum and by insulin. In: *L'Interferon. Colloques de l'Institut National de la Sante et de la Recherche Medicale*, pp. 243-250, Paris, 1970.
55. Jahiel, R.I., Nussenzweig, R., Vilcek, J. and Vanderberg, J.: Protection against experimental murine malaria with interferon inducers. In: *L'Interferon. Colloques de l'Institut National de la Sante et de la Recherche Medicale*, pp. 335-342. Paris, 1970.
56. Vilcek, J.: Metabolic determinants of the induction of interferon by a synthetic double-stranded polynucleotide in rabbit kidney cells. *Ann. N.Y. Acad. Sci.*, 173(1), 390-403, 1970.
57. Vilcek, J.: Studies on the mechanisms of interferon induction by poly I-poly C. In: *Interferon*. Y. Nagano and H.B. Levy (eds.), pp. 165-176. Igaku Shoin Ltd., Tokyo, 1970.
58. Rossman, T.G. and Vilcek, J.: Blocking of interferon action by a component of normal serum. *Arch. Ges. Virusforsch.* 31, 18-27, 1970.
59. Jahiel, R.I. and Vilcek, J.: Antiprotozoal effects of interferon inducers. *International Symposium on Standardization of Interferon Inducers in London, 1969*. Symp. Series Immunobiol. Standard, Vol. 14, pp. 239-246. Karger, Basel/New York, 1970.
60. Vilcek, J., Friedman-Kien, A.E. and Prose, P.H.: Some biological properties of poly I-poly C. *International Symposium on Standardization of Interferon Inducers in London, 1969*. Symp. Series Immunobiol. Standard, Vol. 14, pp. 213-220. Karger, Basel/New York, 1970.
61. Jahiel, R.I., Vilcek, J. and Nussenzweig, R.S.: Exogenous interferon protects mice against *Plasmodium berghei* malaria. *Nature* 227, 1350-1351, 1970.
62. Prose, P.H., Friedman-Kien, A.E. and Vilcek, J.: The uptake of a labeled double-stranded polynucleotide by cultured rabbit kidney cells: An electron microscopic study. *J. Gen. Physiol.* 56(2), 99s-103s, 1970.
63. Friedman-Kien, A.E. and Vilcek, J.: The protective effect of an interferon inducer on rabbit fibroma infection. *Proc. Vth International Congress of Infectious Diseases*, Vol. 1, pp. 239-244, 1970.
64. Vilcek, J. and Jahiel, R.I.: The interferon-inducing, antiviral and antiprotozoal effect of poly I-poly C. In: *Medical and Applied Virology*. M. Sanders and E.H. Lennette (eds.), pp. 391-404. W.H. Green, St. Louis, 1971.
65. Vilcek, J. and Ng, M.H.: Post-transcriptional control of interferon synthesis. *J. Virol.* 7, 588-594, 1971.

66. Rossman, T., Becker, F.F. and Vilcek, J.: An investigation into the mechanism of cytotoxicity of levorphanol. *Mol. Pharmacol.* 7, 480-483, 1971.
67. Prose, P.H., Friedman-Kien, A.E. and Vilcek, J.: Morphogenesis of rabbit fibroma virus: Correlation with pathogenesis of the skin lesion. *Amer. J. Pathol.* 64, 467-478, 1971.
68. Vilcek, J. and Varacalli, F.: Sequential suppression by actinomycin D of interferon production and cellular resistance induced by poly I:C. *J. Gen. Virol.* 13, 185-188, 1971.
69. Gober, L.L., Friedman-Kien, A.E., Havell, A.E. and Vilcek, J.: Suppression of the intracellular growth of *Shigella flexneri* in cell cultures by interferon preparations and polyinosinic-polycytidylic acid. *Infect. Immun.* 5, 370-376, 1972.
70. Ng, M.H. and Vilcek, J.: Interferons: Physico-chemical properties and control of cellular synthesis. *Adv. Protein Chem.*, Vol. 26, pp. 173-241, Academic Press, New York, 1972.
71. Ng, M.H., Berman, B. and Vilcek, J.: Membrane-bound intracellular interferon in rabbit kidney cell cultures. *Virology* 49, 322-325, 1972.
72. Vilcek, J., Barmak, S.L. and Havell E.A.: Control of interferon synthesis: Effect of diethylaminoethyl dextran on induction with polyinosinic-polycytidylic acid. *J. Virol.* 10, 614-621, 1972.
73. Havell, E.A. and Vilcek, J.: Production of high-titered interferon in cultures of human diploid cells. *Antimicrob. Ag. Chemother.* 2, 476-484, 1972.
74. Ng, M.H. and Vilcek, J.: Temperature-sensitive interferon production in rabbit kidney cell cultures treated with toyocamycin. *Biochem. Biophys. Acta* 294, 284-291, 1973.
75. Barmak, S.L. and Vilcek, J.: Altered cellular responses to interferon induction by poly I-poly C: Priming and hyporesponsiveness in cells treated with interferon preparations. *Arch. Ges. Virusforsch.* 43, 272-283, 1973.
76. Vilcek, J. and Havell, E.: Stabilization of interferon messenger RNA activity by treatment of cells with metabolic inhibitors and lowering of the incubation temperature. *Proc. Nat. Acad. Sci. USA* 70, 3909-3913, 1973.
77. Bart, R.S., Kopf, A.W., Vilcek, J. and Lam, S.: Role of interferon in the antimelanoma effects of polyinosinic-polycytidylic acid and Newcastle disease virus. *Nature New Biol.* 245, 229-230, 1973.
78. Berman, B. and Vilcek, J.: Cellular binding characteristics of human interferon. *Virology* 57, 378-386, 1974.
79. Thorbecke, G.J., Friedman-Kien, A.E. and Vilcek, J.: Effect of rabbit interferon on immune responses. *Cell. Immunol.* 12, 290-295, 1974.
80. Mozes, L.W. and Vilcek, J.: Interferon induction in rabbit cells irradiated with UV light. *J. Virol.* 13, 646-651, 1974.
81. Mozes, L.W., Havell, E.A., Gradoville, M.L. and Vilcek, J.: Increased interferon production in human cells irradiated with ultraviolet light. *Infect. Immun.* 10, 1189-1191, 1974.
82. Havell, E.A. and Vilcek, J.: Mass production and some characteristics of human interferon from diploid cells. In: *The Production and Use of Interferon. In Vitro Monograph No. 3*, pp. 74. Tissue Culture Association, Rockville, MD, 1974.

83. Vilcek, J. and Havell, E.A.: Interferon production as a model of induced protein synthesis in eukaryotic cells. In: Effects of Interferon on Cells, Viruses and the Immune System. A. Gerald (ed.), pp. 171-188. Academic Press, London, 1975.
84. Havell, E.A., Vilcek, J., Falcoff, E. and Berman, B.: Suppression of human interferon production by inhibitors of glycosylation. *Virology* 63, 475-483, 1975.
85. Vilcek, J., Havell, E.A., Mozes, L.W. and Berman, B.: Interferon induction with viruses and polynucleotides. Proc. of the 1st Intersect. Congr. of IAMS, Vol. 4, pp. 65-75. Science Council of Japan, 1975.
86. Havell, E.A. and Vilcek, J.: Inhibition of interferon secretion by vinblastine. *J. Cell Biol.* 64, 716-719, 1975.
87. Mozes, L.W. and Vilcek, J.: Distinguishing characteristics of interferon induction with poly(I)•poly(C) and Newcastle disease virus in human cells. *Virology* 65, 100-111, 1975.
88. Havell, E.A., Berman, B., Ogburn, C.A., Berg, K., Paucker, K. and Vilcek, J.: Two antigenically distinct species of human interferon. *Proc. Nat. Acad. Sci. USA* 72, 2185-2187, 1975.
89. Sehgal, P.B., Tamm, I. and Vilcek, J.: Human interferon production: Superinduction by 5,6-dichloro-1- $\beta$ -D-ribofuranosylbenzimidazole. *Science* 190, 282-284, 1975.
90. Pestka, S., McInnes, J., Havell, E.A. and Vilcek, J.: Cell-free synthesis of human interferon. *Proc. Nat. Acad. Sci. USA* 72, 3898-3901, 1975.
91. Sehgal, P.B., Tamm, I. and Vilcek, J.: Enhancement of human interferon production by neutral red and chloroquine: Analysis of inhibition of protein degradation and macromolecular synthesis. *J. Exp. Med.* 142, 1283-1300, 1975.
92. Bartfeld, H. and Vilcek, J.: Immunologically specific production of interferon in cultures of rabbit blood lymphocytes: Association with *in vitro* tests for cell-mediated immunity. *Infect. Immun.* 12, 1112-1115, 1975.
93. Vilcek, J. and Havell, E.: Use of superinduction for the production of interferon in cultures of human diploid fibroblasts. Proc. Symposium on Clinical Use of Interferon. Yugoslav Academy of Sciences and Arts, Zagreb, pp. 27-33, 1975.
94. Havell, E.A., Berman, B. and Vilcek, J.: Antigenic and biological differences between human leukocyte and fibroblast interferons. Proc. Symposium on Clinical Use of Interferon. Yugoslav Academy of Sciences and Arts, Zagreb, pp. 49-61, 1975.
95. Sehgal, P.B., Tamm, I. and Vilcek, J.: On the mechanism of enhancement of human interferon production by actinomycin D and cycloheximide. *Virology* 70, 256-259, 1976.
96. Vilcek, J., Havell, E.A. and Kohase, M.: Superinduction of interferon with metabolic inhibitors: Possible mechanisms and practical applications. *J. Inf. Dis.* 133 (Supp.), A22-A29, 1976.
97. Sehgal, P.B., Tamm, I. and Vilcek, J.: Regulation of human interferon production. I. Superinduction by 5,6-dichloro-1- $\beta$ -D-ribofuranosylbenzimidazole. *Virology* 70, 532-541, 1976.
98. Sehgal, P.B., Tamm, I. and Vilcek, J.: Regulation of human interferon production. II. Inhibition of interferon messenger RNA synthesis by 5,6-dichloro-1- $\beta$ -D-ribofuranosylbenzimidazole. *Virology* 70, 542-544, 1976.

99. Falcoff, E., Havell, E.A., Lewis, J.A., Lande, M.A., Falcoff, R., Sabatini, D.D. and Vilcek, J.: Intracellular location of newly synthesized interferon in human FS-4 cells. *Virology* 75, 384-393, 1976.
100. Vilcek, J., Havell, E.A. and Yamazaki, S.: Antigenic, physicochemical, and biological characterization of human interferons. *Ann. N.Y. Acad. Sci.* 284, 703-710, 1977.
101. Pestka, S., McInnes, J., Weiss, D., Havell, E.A. and Vilcek, J.: *De novo* cell-free synthesis of human interferon. *Ann. N.Y. Acad. Sci.* 284, 697-702, 1977.
102. Kohase, M. and Vilcek, J.: Regulation of human Interferon production stimulated with poly(I)•poly(C): Correlation between shutoff and hyporesponsiveness to reinduction. *Virology* 76, 47-54, 1977.
103. Vilcek, J.: The value of experimental animals, tissue cultures and cell-free systems in the study of interferon and interferon inducers. *International Symposium on Experimental Animals and "in vitro" Systems in Medical Microbiology*, pp. 296-307. WHO Collaborating Centre, Munich, 1977.
104. Havell, E.A., Yip, Y.K. and Vilcek, J.: Correlation of physicochemical and antigenic properties of human leukocyte interferon subspecies. *Arch. Virol.* 55, 121-129, 1977.
105. Havell, E.A., Yamazaki, S. and Vilcek, J.: Altered molecular species of human interferon produced in the presence of inhibitors of glycosylation. *J. Biol. Chem.* 252, 4425-4427, 1977.
106. Cavalieri, R.L., Havell, E.A., Vilcek, J. and Pestka, S.: Synthesis of human interferon by *Xenopus laevis* oocytes: Two structural genes for interferons in human cells. *Proc. Nat. Acad. Sci. USA* 74, 3287-3291, 1977.
107. Cavalieri, R.L., Havell, E.A., Vilcek, J. and Pestka, S.: Induction and decay of human fibroblast interferon mRNA. *Proc. Nat. Acad. Sci. USA* 74, 4415-4419, 1977.
108. Vilcek, J., Yamazaki, S. and Havell, E.A.: Interferon induction by vesicular stomatitis virus and its role in virus replication. *Infect. Immun.* 18, 863-865, 1977.
109. Vilcek, J. and Kohase, M.: Regulation of interferon production: Cell culture studies. *Tex. Rep. Biol. Med.* 35, 57-62, 1977.
110. Havell, E.A., Yip, Y.K. and Vilcek, J.: Characteristics of human lymphoblastoid (Namalva) interferon. *J. Gen. Virol.* 38, 51-59, 1978.
111. Kohase, M. and Vilcek, J.: Studies on the enhancement of interferon production in human diploid (FS-4) cells by ultraviolet. *Jap. J. Med. Sci. Biol.* 31, 17-26, 1978.
112. Havell, E.A., Hayes, T.G. and Vilcek, J.: Synthesis of two distinct interferons by human fibroblasts. *Virology* 89, 330-334, 1978.
113. Frankfort, H.M., Havell, E.A., Croce, C.M. and Vilcek, J.: The synthesis and actions of mouse and human interferons in mouse-human hybrid cells. *Virology* 89, 45-52, 1978.
114. Vilcek, J., Havell, E.A., Gradoville, M.L., Mika-Johnson, M. and Douglas, W.H.J.: Selection of new human foreskin fibroblast cell strains for interferon production. In: *Human Interferon. Production and Clinical Use.* W.R. Stinebring and P.J. Chapple (eds.), pp. 101-118. Plenum Publishing Corp., 1978.

115. Vilcek, J.: Fundamentals of Virus Structure and Replication. In: Antiviral Agents and Viral Diseases of Man. G.J. Galasso, T.C. Merigan and R.A. Buchanan (eds.), pp. 1-38. Raven Press, 1979.
116. Gardner, L.J. and Vilcek, J.: Initial interaction of human fibroblast and leukocyte interferons with FS-4 fibroblasts. *J. Gen. Virol.* 44, 161-168, 1979.
117. Kohase, M. and Vilcek, J.: Interferon induction with Newcastle disease virus in FS-4 cells: Effects of priming with interferon and of virus inactivating treatments. *Jap. J. Med. Sci. Biol.* 32, 281-294, 1979.
118. Kohase, M. and Vilcek, J.: Interferon induction with Newcastle disease virus in FS-4 cells: Effect of 5,6-dichloro-1- $\beta$ -D-ribofuranosylbenzimidazole (DRB). *Arch. Virol.* 62, 263-271, 1979.
119. Vilcek, J.: Interferon as a cell product. In: Cell Substrates. J.C. Petricciani, H.E. Hopps and P.J. Chapple (eds.), pp. 117-127. Plenum Publishing Corp., 1979.
120. Hayes, T.G., Yip, Y.K. and Vilcek, J.: *Le* interferon production by human fibroblasts. *Virology* 98, 351-363, 1979.
121. Vilcek, J., Sulea, I.T., Volvovitz, F. and Yip, Y.K.: Characteristics of interferons produced in cultures of human lymphocytes by stimulation with *Corynebacterium oarvum* and phytohemagglutinin. In: Biochemical Characterization of Lymphokines. A.L. De Weck, F. Kristensen and M. Landy (eds.), pp. 323-329. Academic Press, 1980.
122. Klein, G. and Vilcek, J.: Attempts to induce interferon production by IdUrd-induction and EBV superinfection in human lymphoma lines and their hybrids. *J. Gen. Virol.* 46, 111-117, 1980.
123. Vilcek, J., Frankfort, H.M., Havell, E.A., Hayes, T.G., Pang, R.H.L., Sulea, I.T., Volvovitz, F. and Yip, Y.K.: Synthesis and properties of various human interferons. In: Microbiology - 1980, pp. 204-207. Amer. Soc. Microbiol., Washington, D.C., 1980.
124. Ponzio, N.M., Fitzgerald, K.L., Vilcek, J. and Thorbecke, G.J.: Spontaneous production of T (type II) interferon by a murine reticulum-cell sarcoma. *Ann. N.Y. Acad. Sci.* 350, 157-167, 1980.
125. Vilcek, J., Sulea, I.T., Zerebeckyj, I.L. and Yip, Y.K.: Pharmacokinetic properties of human fibroblast and leukocyte interferon in rabbits. *J. Clin. Microbiol.* 11, 102-105, 1980.
126. Bart, R.S., Porzio, N.R., Kopf, A.W., Vilcek, J.T., Cheng, E.H. and Farcet, Y.: Inhibition of growth of B16 murine malignant melanoma by exogenous interferon. *Cancer Res.* 40, 614-619, 1980.
127. Pang, R.H.L., Hayes, T.G. and Vilcek, J.: *Le* interferon mRNA from human fibroblasts. *Proc. Nat. Acad. Sci.* 77, 5341-5345, 1980.
128. Mozes, L.W. and Vilcek, J.: Production of rabbit interferon. *Methods in Enzymology*, Vol. 78, pp. 126-131. Academic Press, 1981.
129. Yip, Y.K. and Vilcek, J.: Production of human fibroblast interferon in the presence of the glycosylation inhibitor tunicamycin. *Methods in Enzymology*, Vol. 78, 212-219. Academic Press, 1981.

130. Anderson, P., Vilcek, J. and Weissmann, G.: Entrapment of human leukocyte interferon in the aqueous interstices of liposomes. *Infect. Immun.* 31, 1099-1103, 1981.
131. Yip, Y.K., Pang, R.H.L., Urban, C. and Vilcek, J.: Partial purification and characterization of human  $\gamma$  (immune) interferon. *Proc. Nat. Acad. Sci.* 78, 1601-1605, 1981.
132. Taniguchi, T., Pang, R.H.L., Yip, Y.K., Henriksen, D. and Vilcek, J.: Partial characterization of  $\gamma$  (immune) interferon mRNA extracted from human lymphocytes. *Proc. Nat. Acad. Sci.* 78, 3469-3472, 1981.
133. Yip, Y.K., Pang, R.H.L., Oppenheim, J.D., Nachbar, M.S., Henriksen, D., Zerebeckyj-Eckhardt, I. and Vilcek, J.: Stimulation of human gamma interferon production by diterpene esters. *Infect. Immun.* 34, 131-139, 1981.
134. Vilcek, J., Yip, Y.K., Pang, R.H.L., Thayer, K., Henriksen, D., Zerebeckyj-Eckhardt, I. and Urban, C.: How many interferons are there? In: *Cellular Responses to Molecular Modulators*. Miami Winter Symposium, Vol. 18. L.W. Mozes, J. Schultz, W.A. Scott and R. Werner (eds.), pp. 331-345. Academic Press, 1981.
135. Pang, R.H.L., Yip, Y.K. and Vilcek, J.: Immune interferon induction by a monoclonal antibody specific for human T cells. *Cell. Immunol.* 64, 304-311, 1981.
136. Oladipupo Williams, C.K., Svet-Moldavskaya, I., Vilcek, J., Ohnuma, T. and Holland, J.F.: Inhibitory effects of human leukocyte and fibroblast interferons on normal and chronic myelogenous leukemic granulocytic progenitor cells. *Oncology* 38, 356-360, 1981.
137. Vilcek, J.: The status of interferon research. In: *The Clinical Potential of Interferons*. R. Kono and J. Vilcek (eds.), pp. 3-14. Univ. of Tokyo Press, 1982.
138. Kascsak, R.J., Carp, R.I., Vilcek, J.T., Donnenfeld, H. and Bartfeld, H.: Virological studies in amyotrophic lateral sclerosis. *Muscle Nerve* 5, 93-101, 1982.
139. Vilcek, J., Yip, Y.K. and Pang, R.H.L.: Induction and characterization of human immune (gamma) interferon. In: *Interferon, Properties, Mode of Action, Production, Clinical Application*. K. Munk and H. Kirchner (eds.), pp. 150-158. Karger, Basel, 1982.
140. Anderson, P., Tycko, B., Maxfield, F. and Vilcek, J.: Effect of primary amines on interferon action. *Virology* 117, 510-515, 1982.
141. Vilcek, J., Yip, Y.K., Stone-Wolff, D.S. and Pang, R.H.L.: Stimulation of gamma interferon production by TPA and related diterpene esters. *Tex. Rep. Biol. Med.* 41 (part 1) 108-115, 1982.
142. Yip, Y.K., Barrowclough, B.S., Urban, C. and Vilcek, J.: Molecular weight of human gamma interferon is similar to that of other human interferons. *Science* 215, 411-413, 1982.
143. Yip, Y.K., Barrowclough, B.S., Urban, C. and Vilcek, J.: Purification of two subspecies of human  $\gamma$  (immune) interferon. *Proc. Nat. Acad. Sci.* 79, 1820-1824, 1982.
144. Bartfeld, H., Dham, C., Donnenfeld, H., Jashnani, L., Carp, R., Kascsak, R., Vilcek, J., Rapport, M. and Wallenstein, S.: Immunological profile of amyotrophic lateral sclerosis patients and their cell-mediated immune responses to viral and CNS antigens. *Clin. Exp. Immunol.* 48, 137-147, 1982.
145. Preble, O.T., Black, R.J., Friedman, R.M., Klippel, J.H. and Vilcek, J.: Systemic lupus erythematosus: Presence in human serum of an unusual acid-labile leukocyte interferon. *Science* 216, 429-431, 1982.

146. Panem, S., Check, I.J., Henriksen, D. and Vilcek, J.: Antibodies to  $\alpha$ -interferon in a patient with systemic lupus erythematosus. *J. Immunol.* 129, 1-3, 1982.
147. Reem, G.H., Cook, L.A., Henriksen, D.M. and Vilcek, J.: Gamma interferon induction in human thymocytes activated by lectins and B cell lines. *Infect. Immun.* 37, 216-221, 1982.
148. Meager, A., Buchanan, P., Simmons, J.G., Hayes, T.G. and Vilcek, J.: Production of human alpha- and beta-interferons by human-rodent hybrids. *J. Interferon Res.* 2, 167-176, 1982.
149. Panem, S., Check, I.J., Henriksen, D. and Vilcek, J.: Alpha interferon and antibody to alpha interferon in systemic lupus erythematosus. In: *Interferons. UCLA Symposia on Molecular and Cellular Biology*, Vol. XXV. T.C. Merigan, R.M. Friedman and C.F. Fox (eds.), pp. 233-240. Academic Press; New York, 1982.
150. Yip, Y.K., Anderson, P., Stone-Wolff, D.S., Barrowclough, B.S., Urban, C. and Vilcek, J.: Structure-function studies with human interferon-gamma. In: *Interferons. UCLA Symposia on Molecular and Cellular Biology*, Vol. XXV. T.C. Merigan, R.M. Friedman and C.F. Fox (eds.), pp. 353-363. Academic Press, New York, 1982.
151. Preble, O.T., Black, R.J., Klippel, J.H., Friedman, R. and Vilcek, J.: Interferon in systemic lupus erythematosus. In: *Interferons. UCLA Symposia on Molecular and Cellular Biology*, Vol. XXV. T.C. Merigan, R.M. Friedman and C.F. Fox (eds.), pp. 219-231. Academic Press, New York, 1982.
152. Frankfort, H.M. and Vilcek, J.: Inhibition of interferon production in human fibroblasts by a tumor promoting phorbol ester. *Arch. Virol.* 73, 295-309, 1982.
153. Vilcek, J.: The importance of having gamma. In: *Interferon 1982*. I. Gresser (ed.), pp. 129-154. Academic Press, London, 1982.
154. Anderson, P., Yip, Y.K. and Vilcek, J.: Specific binding of  $^{125}\text{I}$ -human interferon- $\gamma$  to high affinity receptors on human fibroblasts. *J. Biol. Chem.* 257, 11301-11304, 1982.
155. Le, J., Prenskey, W., Henriksen, D. and Vilcek, J.: Synthesis of alpha and gamma interferons by a human cutaneous lymphoma with helper T-cell phenotype. *Cell. Immunol.* 72, 157-165, 1982.
156. Le, J., Vilcek, J., Saxinger, C. and Prenskey, W.: Human T cell hybridomas secreting immune interferon. *Proc. Nat. Acad. Sci.* 79, 7857-7861, 1982.
157. Anderson, P. and Vilcek, J.: Synthesis and biological characterization of a covalent conjugate between interferon and ricin toxin B chain. *Virology* 123, 457-460, 1982.
158. DeStefano, E., Friedman, R.M., Friedman-Kien, A.E., Goedert, J.J., Henriksen, D., Preble, O.T., Sonnabend, J.A. and Vilcek, J.: Acid-labile human leukocyte interferon in homosexual men with Kaposi's sarcoma and lymphadenopathy. *J. Inf. Dis.* 146, 451-455, 1982.
159. Anderson, P., Yip, Y.K. and Vilcek, J.: Receptor binding and endocytosis of purified human interferon-gamma (IFN- $\gamma$ ). In: *Interleukins, Lymphokines, and Cytokines*. J.J. Oppenheim and S. Cohen (eds.), pp. 553-560. Academic Press, 1983.
160. Vilcek, J.: Interferon is a model cytokine. In: *Interleukins, Lymphokines, and Cytokines*. J.J. Oppenheim and S. Cohen (eds.), pp. 761-763. Academic Press, 1983.

161. Le, J., Vilcek, J., Sadlik, J.R., Cheung, M.K., Balazs, I., Sarngadharan, M.G. and Prenskey, W.: Lymphokine production by human T cell hybridomas. *J. Immunol.* 130, 1231-1235, 1983.
162. Pearlstein, K.T., Palladino, M.A., Stone-Wolff, D.S., Oettgen, H.F. and Vilcek, J.: Coproduction of interleukin-2 and interferon- $\gamma$  in human mononuclear cells. *J. Biol. Resp. Mod.* 2, 81-91, 1983.
163. Anderson, P., Yip, Y.K. and Vilcek, J.: Human interferon- $\gamma$  is internalized and degraded by cultured fibroblasts. *J. Biol. Chem.* 258, 6497-6502, 1983.
164. Reem, G.H., Cook, L.A. and Vilcek, J.: Gamma interferon synthesis by human thymocytes and T lymphocytes inhibited by cyclosporin A. *Science* 221, 63-65, 1983.
165. Yip, Y.K., Kelker, H.C., Stone-Wolff, D.S., Pearlstein, K., Urban, C. and Vilcek, J.: Stimulation of lymphokine production by teleocidin, aplysiatoxin, and debromoaplysiatoxin. *Cell. Immunol.* 79, 389-395, 1983.
166. Kelker, H.C., Yip, Y.K., Anderson, P. and Vilcek, J.: Effects of glycosidase treatment on the physicochemical properties and biological activity of human interferon- $\gamma$ . *J. Biol. Chem.* 258, 8010-8013, 1983.
167. Pearlstein, K.T., Palladino, M.A., Welte, K. and Vilcek, J.: Purified human interleukin-2 enhances induction of immune interferon. *Cell. Immunol.* 80, 1-9, 1983.
168. Vilcek, J.: Selection of interferons for clinical use. *Proc. 13th Internat. Congr. Chemother.*, Part 202, p. 14-25. Vienna 1983.
169. Vilcek, J., Pearlstein, K.T., Le, J., Stone-Wolff, D.S., Kelker, H.C. and Yip, Y.K.: Interferon-gamma: Interactions with other lymphokines. In: *The Biology of the Interferon System 1983*. E. De Maeyer and H. Schellekens (eds.), pp. 281-292. Elsevier Science Publishers, 1983.
170. Yip, Y.K., Kelker, H.C., Le, J., Anderson, P., Barrowclough, B.S., Urban, C. and Vilcek, J.: The subunit structure of human interferon-gamma. In: *The Biology of the Interferon System 1983*. E. De Maeyer and H. Schellekens (eds.), pp. 129-133. Elsevier Science Publishers, 1983.
171. Panem, S. and Vilcek, J.: Antibodies to interferon in man. In: *The Biology of the Interferon System 1983*. E. De Maeyer and H. Schellekens (eds.), pp. 369-378. Elsevier Science Publishers, 1983.
172. Le, J., Prenskey, W., Yip, Y.K., Chang, Z., Hoffman, T., Stevenson, H.C., Balazs, I., Sadlik, J.R. and Vilcek, J.: Activation of human monocyte cytotoxicity by natural and recombinant immune interferon. *J. Immunol.* 131, 2821-2826, 1983.
173. Panem, S., Ordóñez, N. and Vilcek, J.: Renal deposition of alpha interferon in systemic lupus erythematosus. *Infect. Immun.* 42, 368-373, 1983.
174. Vilcek, J., Friedman-Kien, A.E., Henriksen-DeStefano, D., Sonnabend, J.A., Preble, O.T. and Friedman, R.M.: The role of interferon in AIDS. In: *AIDS: The Epidemic of Kaposi's Sarcoma and Opportunistic Infections in Homosexual Men*. A.E. Friedman-Kien and L. Laubenstein (eds.), pp. 193-198. Masson Publishing, 1984.
175. Le, J., Rubin, B.Y., Kelker, H.C., Feit, C., Nagler, C. and Vilcek, J.: Natural and recombinant *Escherichia coli*-derived interferon- $\gamma$  differ in their reactivity with monoclonal antibody. *J. Immunol.* 132, 1300-1304, 1984.

176. Le, J., Barrowclough, B.S. and Vilcek, J.: Monoclonal antibodies to human immune interferon and their application for affinity chromatography. *J. Immunol. Methods* 69, 61-70, 1984.
177. Stone-Wolff, D.S., Yip, Y.K., Kelker, H.C., Le, J., Henriksen-DeStefano, D., Rubin, B.Y., Rinderknecht, E., Aggarwal, B.B. and Vilcek, J.: Interrelationships of human interferon-gamma with lymphotoxin and monocyte cytotoxin. *J. Exp. Med.* 159, 828-843, 1984.
178. Ponzio, N.M., Hayama, T., Nagler, C., Katz, I.R., Hoffmann, M.K., Gilbert, K., Vilcek, J. and Thorbecke, G.J.: Ia-restricted interaction of normal lymphoid cells and SJL lymphoma (Reticulum Cell Sarcoma) leading to lymphokine production. II. Rapid production of antibody-enhancing factor, interleukin 2, and immune interferon. *J. Nat. Cancer Inst.* 72, 311-320, 1984.
179. Hayama, T., Ponzio, N.M., Nagler, C., Vilcek, J., Coico, R.F. and Thorbecke, G.J.: Ia-restricted interaction of normal lymphoid cells and SJL lymphoma (Reticulum Cell Sarcoma) leading to lymphokine production. III. Relative roles of reticulum cell sarcoma and normal lymphoid cells in lymphokine production. *J. Nat. Cancer Inst.* 72, 321-331, 1984.
180. Preble, O.T., Vilcek, J., Friedman-Kien, A.E., Friedman, R.M., Goedert, J.J. and Sonnabend, J.A.: Acid-labile leukocyte interferon in homosexual men with Kaposi's sarcoma and lymphadenopathy. In: *The Acquired Immune Deficiency Syndrome and Infections of Homosexual Men*. P. Ma and D. Armstrong (eds.), pp. 381-396. York Medical Books, 1984.
181. Vilcek, J.: Adverse effects of interferon in virus infections, autoimmune diseases and acquired immunodeficiency. *Prog. Med. Virol.*, Vol. 30, pp. 62-77. S. Karger Basel, 1984.
182. Kelker, H.C., Le, J., Rubin, B.Y., Yip, Y.K., Nagler, C. and Vilcek, J.: Three molecular weight forms of natural human interferon- $\gamma$  revealed by immunoprecipitation with monoclonal antibody. *J. Biol. Chem.* 259, 4301-4304, 1984.
183. Le, J. and Vilcek, J.: Lymphokine-mediated activation of human monocytes: Neutralization by monoclonal antibody to interferon- $\gamma$ . *Cell. Immunol.* 85, 278-283, 1984.
184. Vilcek, J. and Sreevalsan, T.: Fundamentals of virus structure and replication. In: *Antiviral Agents and Viral Diseases of Man*. G.J. Galasso, T.C. Merigan and R.A. Buchanan (eds.), 2nd Edition, pp. 1-33. Raven Press, 1984.
185. Palladino, M.A., Svedersky, L.P., Shepard, H.M., Pearlstein, K.T., Vilcek, J. and Scheid, M.P.: Interleukin regulation of the immune system "IRIS". In: *Interferon: Research, Clinical Application, and Regulatory Consideration*. K.C. Zoon, P.D. Noguchi and T.-Y. Liu (eds.), pp. 139-148. Elsevier Science Publishing, 1984.
186. Vilcek, J.: Summary of the Conference. In: *Interferon: Research, Clinical Application, and Regulatory Consideration*. K.C. Zoon, P.D. Noguchi and T.-Y. Liu (eds.), pp. 295-301. Elsevier Science Publishing, 1984.
187. Ojo-Amaize, E.A., Vilcek, J., Cochrane, A.H. and Nussenzweig, R.S.: *Plasmodium berghei* sporozoites are mitogenic for murine T cells, induce interferon, and activate natural killer cells. *J. Immunol.* 133, 1005-1009, 1984.
188. Le, J., Yip, Y.K. and Vilcek, J.: Cytolytic activity of interferon-gamma and its synergism with 5-fluorouracil. *Int. J. Cancer* 34, 495-500, 1984.

189. Chang, T.W., McKinney, S., Liu, V., Kung, P.C., Vilcek, J. and Le, J.: Use of monoclonal antibodies as sensitive and specific probes for biologically active human  $\gamma$ -interferon. *Proc. Nat. Acad. Sci. USA* 81, 5219-5222, 1984.
190. Shulman, L.M., Kamarck, M.E., Slate, D.L., Ruddle, F.H., Branca, A.W., Baglioni, C., Maxwell, B.L., Gutterman, J., Anderson, P., Nagler, C. and Vilcek, J.: Antibodies to chromosome 21 coded cell surface components block binding of human  $\alpha$  interferon but not  $\gamma$  interferon to human cells. *Virology* 137, 422-427, 1984.
191. Vilcek, J.: Interferon production and its regulation. In: *Interferon*, Vol. 3. R.M. Friedman (ed.), pp. 1-10. Elsevier Science Publishers, 1984.
192. Preble, O.T., Rook, A.H., Quinnan, G.V., Vilcek, J., Friedman, R.M., Steis, R., Gelmann, E.P. and Sonnabend, J.A.: Role of interferon in AIDS. In: *Acquired Immune Deficiency Syndrome*, Vol. 437. I.J. Selikoff, A.S. Teirstein and S.Z. Hirschman (eds.), pp. 65-75. *Annals of the New York Academy of Sciences*, New York, 1984.
193. Nishi, T., Fujita, T., Nishi-Takaoka, C., Saito, A., Matsumoto, T., Sato, M., Oka, T., Itoh, S., Yip, Y.K., Vilcek, J. and Taniguchi, T.: Cloning and expression of a novel variant of human interferon- $\gamma$  cDNA. *J. Biochem.* 97, 153-159, 1985.
194. Vilcek, J., Kelker, H.C., Le, J. and Yip, Y.K.: Structure and function of human interferon-gamma. In: *Mediators in Cell Growth and Differentiation*. R.J. Ford and A.L. Maizel (eds.), pp. 299-313. Raven Press, New York, 1985.
195. Le, J., Vilcek, J. and Prenskey, W.: Generation and characterization of human T-cell hybridomas that constitutively produce immune interferon. In: *Human Hybridomas and Monoclonal Antibodies*. E.G. Engleman *et al.* (eds.), pp. 355-369. Plenum Publishing Corp., 1985.
196. Vilcek, J., Gray, P.W., Rinderknecht, E. and Sevastopoulos, C.G.: Interferon  $\gamma$ : A lymphokine for all seasons. In: *Lymphokines*, Vol. 11. E. Pick (ed.), pp. 1-32. Academic Press, New York, 1985.
197. Vilcek, J., Henriksen-DeStefano, D., Robb, R.J. and Le, J.: Interleukin-2 as the inducing signal for interferon-gamma in peripheral blood leukocytes stimulated with mitogen or antigen. In: *The Biology of the Interferon System 1984*. H. Kirchner and H. Schellekens (eds.), pp. 385-396. Elsevier Science Publishers, 1985.
198. Vilcek, J., Le, J. and Yip, Y.K.: Induction of human interferon gamma with phorbol esters and phytohemagglutinin. In: *Methods in Enzymology*, Vol. 119, Part C. S. Pestka (ed.), pp. 48-54. Academic Press, 1986.
199. Kelker, H.C., Oppenheim, J.D., Stone-Wolff, D.S., Henriksen-DeStefano, D. and Vilcek, J.: Human lymphotoxin and tumor necrosis factor: Separation and characterization of the two cytokines from peripheral blood leukocytes. In: *Cellular and Molecular Biology of Lymphokines*. C. Sorg and A. Schimpl (eds.), pp. 341-347. Academic Press, 1985.
200. Le, J., Chang, T.W., Liu, V., Yip, Y.K. and Vilcek, J.: Monoclonal antibodies as structural probes for oligomeric human interferon-gamma. *J. Interferon Res.* 5, 445-453, 1985.
201. Kelker, H.C., Oppenheim, J.D., Stone-Wolff, D., Henriksen-DeStefano, D., Aggarwal, B.B., Stevenson, H.C. and Vilcek, J.: Characterization of human tumor necrosis factor produced by peripheral blood monocytes and its separation from lymphotoxin. *Int. J. Cancer* 36, 69-73, 1985.

202. Krigel, R.L., Odajnyk, C.M., Laubenstein, L.J., Ostreicher, R., Wernz, J., Vilcek, J., Rubenstein, P. and Friedman-Kien, A.E.: Therapeutic trial of interferon- $\gamma$  in patients with epidemic Kaposi's sarcoma. *J. Biol. Resp. Modif.* 4, 358-364, 1985.
203. Vilcek, J., Henriksen-DeStefano, D., Siegel, D., Klion, A., Robb, R.J. and Le, J.: Regulation of IFN- $\gamma$  induction in human peripheral blood cells by exogenous and endogenously produced interleukin 2. *J. Immunol.* 135, 1851-1856, 1985.
204. Vilcek, J., Henriksen-DeStefano, D., Siegel, D. and Le, J.: IFN-gamma induction in peripheral blood leukocytes by interleukin 2: role of monocytes, interleukin 1 and IFN-gamma. In: *The Interferon System*. F. Dianzani and G.B. Rossi (eds.), Vol. 24, pp. 43-47. Serono Symposia Publications, Raven Press, 1985.
205. Tsujimoto, M., Yip, Y.K. and Vilcek, J.: Tumor necrosis factor: Specific binding and internalization in sensitive and resistant cells. *Proc. Nat. Acad. Sci. USA* 82, 7626-7630, 1985.
206. Le, J., Yao, J.S., Henriksen-DeStefano, D. and Vilcek, J.: Interferon-gamma production by T lymphocytes is dependent on accessory cells and regulated by HLA-DR antigen and interleukin 1. In: *The Biology of the Interferon System 1985*. W.E. Stewart II and H. Schellekens (eds.), pp. 229-233. Elsevier Science Publishers, 1986.
207. Vilcek, J., Henriksen-DeStefano, D., Palombella, V.J. and Tsujimoto, M.: Interactions between tumor necrosis factor and interferons. In: *The Biology of the Interferon System 1985*. W.E. Stewart II and H. Schellekens (eds.), pp. 249-256. Elsevier Science Publishers, 1986.
208. Vilcek, J., Klion, A., Henriksen-DeStefano, D., Zemtsov, A., Davidson, D.M., Davidson, M., Friedman-Kien, A.E. and Le, J.: Defective gamma-interferon production in peripheral blood leukocytes of patients with acute tuberculosis. *J. Clin. Immunol.* 6, 146-151, 1986.
209. Ilson, D.H., Torrence, P.F. and Vilcek, J.: Two molecular weight forms of human 2',5'-oligoadenylate synthetase have different activation requirements. *J. Interferon Res.* 6, 5-12, 1986.
210. Tsujimoto, M., Yip, Y.K. and Vilcek, J.: Interferon- $\gamma$  enhances expression of cellular receptors for tumor necrosis factor. *J. Immunol.* 136, 2441-2444, 1986.
211. Tsujimoto, M. and Vilcek, J.: Tumor necrosis factor receptors in HeLa cells and their regulation by interferon- $\gamma$ . *J. Biol. Chem.* 261, 5384-5388, 1986.
212. Vilcek, J., Palombella, V.J., Henriksen-DeStefano, D., Swenson, C., Feinman, R., Hirai, M. and Tsujimoto, M.: Fibroblast growth enhancing activity of tumor necrosis factor and its relationship to other polypeptide growth factors. *J. Exp. Med.* 163, 632-643, 1986.
213. Siegel, D.S., Le, J. and Vilcek, J.: Modulation of lymphocyte proliferation and immunoglobulin synthesis by interferon- $\gamma$  and "Type I" interferons. *Cell. Immunol.* 101, 380-390, 1986.
214. Le, J., Lin, J.-X., Henriksen-DeStefano, D. and Vilcek, J.: Bacterial lipopolysaccharide-induced interferon- $\gamma$  production: roles of interleukin 1 and interleukin 2. *J. Immunol.* 136, 4525-4530, 1986.
215. Feinman, R., Siegel, D.S., Le, J. and Vilcek, J.: Interferon- $\gamma$  enhances target cell sensitivity to monocyte killing. *Cell. Immunol.* 99, 287-293, 1986.

216. Le, J., Yao, J.S., Knowles, D.M. II and Vilcek, J.: Accessory function of thymic and tonsillar dendritic cells in interferon gamma production by T lymphocytes. *Lymphokine Res.* 5, 205-213, 1986.
217. Tsujimoto, M., Feinman, R., Kohase, M. and Vilcek, J.: Characterization and affinity crosslinking of receptors for tumor necrosis factor on human cells. *Arch. Bioch. Biophys.* 249, 563-568, 1986.
218. Kohase, M., Henriksen-DeStefano, D., May, L.T., Vilcek, J. and Sehgal, P.B.: Induction of  $\beta_2$ -interferon by tumor necrosis factor: a homeostatic mechanism in the control of cell proliferation. *Cell* 45, 659-666, 1986.
219. Hao, X.-S., Le, J., Vilcek, J. and Chang, T.W.: Determination of human T cell activity in response to allogeneic cells and mitogens: an immunochemical assay for  $\gamma$ -interferon is more sensitive and specific than a proliferation assay. *J. Immunol. Methods* 92, 59-63, 1986.
220. Tsujimoto, M., Feinman, R. and Vilcek, J.: Differential effects of Type I IFN and IFN- $\gamma$  on the binding of tumor necrosis factor to receptors in two human cell lines. *J. Immunol.* 137, 2272-2276, 1986.
221. Vilcek, J., Kohase, M. and Henriksen-DeStefano, D.: Mitogenic effect of double-stranded RNA in human fibroblasts: role of autogenous interferon. *J. Cell. Physiol.* 130, 37-43, 1987.
222. Le, J., Weinstein, D., Gubler, U. and Vilcek, J.: Induction of membrane-associated interleukin 1 by tumor necrosis factor in human fibroblasts. *J. Immunol.* 138, 2137-2142, 1987.
223. Tsujimoto, M., Yokota, S., Vilcek, J. and Weissmann, G.: Tumor necrosis factor provokes superoxide anion generation from neutrophils. *Bioch. Biophys. Res. Comm.* 137, 1094-1100, 1986.
224. Kohase, M., May, L.T., Tamm, I., Vilcek, J. and Sehgal, P.B.: A cytokine network in human diploid fibroblasts: interactions of  $\beta$ -interferons, tumor necrosis factor, platelet-derived growth factor, and interleukin-1. *Mol. Cell. Biol.* 7, 273-280, 1987.
225. Feinman, R., Henriksen-DeStefano, D., Tsujimoto, M. and Vilcek, J.: Tumor necrosis factor is an important mediator of tumor cell killing by human monocytes. *J. Immunol.* 138, 635-640, 1987.
226. Palombella, V.J., Yamashiro, D.J., Maxfield, F.R., Decker, S.J. and Vilcek, J.: Tumor necrosis factor increases the number of epidermal growth factor receptors on human fibroblasts. *J. Biol. Chem.* 262, 1950-1954, 1987.
227. Kohase, M., Henriksen-DeStefano, D., Sehgal, P.B. and Vilcek, J.: Dexamethasone inhibits feedback regulation of the mitogenic activity of tumor necrosis factor, interleukin-1, and epidermal growth factor in human fibroblasts. *J. Cell. Physiol.* 132, 271-278, 1987.
228. Vilcek, J., Feinman, R., Palombella, V., Kelker, H., Tsujimoto, M. and Le, J.: Interactions of interferon-gamma with other lymphokines/cytokines. In: *The Interferon System: A Current Review to 1987*. S. Baron *et al.* (eds.), pp. 205-211. The University of Texas Press, 1987.
229. Kohase, M., Tsujimoto, M., May, L.T., Sehgal, P.B. and Vilcek, J.: Regulation of human fibroblast growth by autocrine interferon-beta. In: *The Biology of the Interferon System 1986*. K. Cantell and H. Schellekens (eds.), pp. 159-163. Martinus Nijhoff, 1987.

230. Tsujimoto, M., Tanaka, S., Sakuragawa, Y., Tsuruoka, N., Funakoshi, K., Butsugan, T., Nakazato, H., Nishihara, T., Noguchi, T. and Vilcek, J.: Comparative studies of the biological activities of human tumor necrosis factor and its derivatives. *J. Biochem.* 101, 919-925, 1987.
231. Le, J. and Vilcek, J.: Tumor necrosis factor and interleukin 1: Cytokines with multiple overlapping biological activities. *Lab. Investig.* 56, 234-248, 1987.
232. Sehgal, P.B., May, L.T., Tamm, I. and Vilcek, J.: Human  $\beta_2$  interferon and B-cell differentiation factor BSF-2 are identical. *Science* 235, 731-732, 1987.
233. Vilcek, J., Tsujimoto, M., Palombella, V.J., Kohase, M. and Le, J.: Tumor necrosis factor: Receptor binding and mitogenic action in fibroblasts. *J. Cell. Physiol., Suppl.* 5, 57-61, 1987.
234. Vilcek, J.: Regulation of cell growth by interferon and tumor necrosis factor. In: *Frontiers in Microbiology*. E. De Clerq (ed.), pp. 125-135. Martinus Nijhoff, 1987.
235. Le, J. and Vilcek, J.: Accessory function of human fibroblasts in mitogen-stimulated interferon- $\gamma$  production by T lymphocytes: Inhibition by interleukin 1 and tumor necrosis factor. *J. Immunol.* 139, 3330-3337, 1987.
236. Lin, J.-X. and Vilcek, J.: Tumor necrosis factor and interleukin-1 cause a rapid and transient stimulation of *c-fos* and *c-myc* mRNA levels in human fibroblasts. *J. Biol. Chem.* 262, 11908-11911, 1987.
237. Vilcek, J.: Inverse interference by growth factors. *J. Interferon Res. (Commemorative Issue)* 7, 537-543, 1987.
238. Vilcek, J.: From interferons to cytokines. In: *Proc. Second Laupheim Interferon Symposium*, pp. 3-9. W. Zuckschwerdt Verlag, Munchen, 1987.
239. Feinman, R. and Vilcek, J.: Synergistic actions of interferons and tumor necrosis factor. In: *Clinical Aspects of Interferon*. M. Revel (ed.), pp. 353-363. Martinus Nijhoff Publishing, 1988.
240. Tsujimoto, M. and Vilcek, J.: Tumor necrosis factor-induced downregulation of its receptors on HeLa cells. *J. Biochem.* 102, 1571-1577, 1987.
241. Kohase, M., Zhang, Y., Lin, J.-X., Yamazaki, S., Sehgal, P.B. and Vilcek, J.: Interleukin-1 can inhibit interferon- $\beta$  synthesis and its antiviral action: Comparison with tumor necrosis factor. *J. Interferon Res.* 8, 559-570, 1988.
242. Reis, L.F.L., Le, J., Hirano, T., Kishimoto, T. and Vilcek, J.: Antiviral action of tumor necrosis factor in human fibroblasts is not mediated by B cell stimulatory factor 2/IFN- $\beta_2$ , and is inhibited by specific antibodies to IFN- $\beta$ . *J. Immunol.* 140, 1566-1570, 1988.
243. Zhang, Y., Lin, J.-X. and Vilcek, J.: Synthesis of interleukin 6 (interferon- $\beta_2$ /B cell stimulatory factor 2) in human fibroblasts is triggered by an increase in intracellular cyclic AMP. *J. Biol. Chem.* 263, 6177-6182, 1988.
244. Palombella, V.J., Mendelsohn, J. and Vilcek, J.: Mitogenic action of tumor necrosis factor in human fibroblasts: Interaction with epidermal growth factor and platelet-derived growth factor. *J. Cell. Physiol.* 135, 23-31, 1988.

245. Vilcek, J., Palombella, V.J., Zhang, Y., Lin, J.-X., Feinman, R., Reis, L.F.L. and Le, J.: Mechanisms and significance of the mitogenic and antiviral actions of TNF. *Forum on Immunology. Ann. Inst. Pasteur* 139, 307-311, 1988.
246. Le, J., Reis, L.F.L. and Vilcek, J.: Tumor necrosis factor and interleukin 1 can act as essential growth factors in a murine plasmacytoma line. *Lymphokine Res.* 7, 99-106, 1988.
247. Zhang, Y., Lin, J.-X., Yip, Y.K. and Vilcek, J.: Enhancement of cAMP levels and of protein kinase activity by tumor necrosis factor and interleukin 1 in human fibroblasts: Role in the induction of interleukin 6. *Proc. Nat. Acad. Sci. USA* 85, 6802-6805, 1988.
248. Le, J., Fredrickson, G., Reis, L.F.L., Diamantstein, T., Hirano, T., Kishimoto, T. and Vilcek, J.: Interleukin 2-dependent and interleukin 2-independent pathways of regulation of thymocyte function by interleukin 6. *Proc. Nat. Acad. Sci. USA* 85, 8643-8647, 1988.
249. Reis, L.F.L., Lee, T.H., Zhang, Y., Lin, J.-X., Kohase, M., Fujita, T., Taniguchi, T. and Vilcek, J.: Role of IFN- $\beta$  in the antiviral action of TNF in human fibroblasts. In: *The Biology of the Interferon System 1988. Proceedings of the Fifth Annual Meeting of the International Society for Interferon Research.* Y. Kawade and S. Kobayashi (eds.), pp. 271-276. Kodansha Scientific, Tokyo, 1989.
250. Le, J., Fredrickson, G., Pollack, M. and Vilcek, J.: Activation of thymocytes and T cells by interleukin-6. *Ann. N.Y. Acad. Sci.* 557, 444-453, 1989.
251. Reis, L.F.L., Lee, T.H., Kohase, M., Zhang, Y., Lin, J.-X., Fujita, T., Taniguchi, T. and Vilcek, J.: Antiviral action of TNF in human fibroblasts requires the presence of subeffective concentrations of classical interferon- $\beta$ . *Ann. N.Y. Acad. Sci.* 557, 540-542, 1989.
252. Zhang, Y., Lin, J.-X., Yip, Y.K. and Vilcek, J.: Stimulation of interleukin-6 mRNA levels by tumor necrosis factor and interleukin-1: Role of intracellular cAMP. *Ann. N.Y. Acad. Sci.* 557, 548-549, 1989.
253. Vilcek, J., Lin, J.-X., Palombella, V.J., Zhang, Y., Reis, L.F.L., Le, J., Kohase, M. and Tsujimoto, M.: Molecular mechanisms of tumor necrosis factor (TNF) action in cultured fibroblasts. In: *Recent Progress in Cytokine Research 1989. Proceedings of the First International Mochida Memorial Symposium*, pp. 3-21. Tokyo, 1989.
254. Vilcek, J.: Interferons. In: *Peptide Growth Factors and Their Receptors II, Handbook of Experimental Pharmacology*, Vol. 95/II. M.B. Sporn and A.B. Roberts (eds.), pp. 3-38. Springer-Verlag, 1990.
255. Aderka, D., Reis, L.F.L., Lee, T.H., Palombella, V.J., Zhang, Y., Lin, J.-X., Le, J. and Vilcek, J.: Interleukin-6: A cytokine induced by TNF, and once thought to mediate the antiviral action of TNF, inhibits TNF production in monocytes and in U937 cells primed with GM-CSF. In: *Tumor Necrosis Factor: Structure, Mechanism of Action, Role in Disease and Therapy.* B. Bonavida and G. Granger (eds.), pp. 133-139. Basel, Karger, 1990.
256. Reis, L.F.L., Lee, T.H. and Vilcek, J.: Tumor necrosis factor acts synergistically with autocrine interferon- $\beta$  and increases interferon- $\beta$  mRNA levels in human fibroblasts. *J. Biol. Chem.* 264, 16351-16354, 1989.
257. Palombella, V.J. and Vilcek, J.: Mitogenic and cytotoxic actions of tumor necrosis factor in BALB/c 3T3 cells. Role of phospholipase activation. *J. Biol. Chem.* 264, 18128-18136, 1989.

258. Aderka, D., Le, J. and Vilcek, J.: IL-6 inhibits lipopolysaccharide-induced tumor necrosis factor production in cultured human monocytes, U937 cells, and in mice. *J. Immunol.* 143, 3517-3523, 1989.
259. Fujita, T., Reis, L.F.L., Watanabe, N., Kimura, Y., Taniguchi, T. and Vilcek, J.: Induction of the transcription factor IRF-1 and interferon- $\beta$  mRNAs by cytokines and activators of second messenger pathways. *Proc. Nat. Acad. Sci. USA* 86, 9936-9940, 1989.
260. Le, J. and Vilcek, J.: Interleukin 6: A multifunctional cytokine regulating immune reactions and the acute phase protein response. *Lab. Investig.* 61: 588-602, 1989.
261. Lee, T.H., Lee, G.W., Ziff, E.B. and Vilcek, J.: Isolation and characterization of eight tumor necrosis factor-induced gene sequences from human fibroblasts. *Mol. Cell. Biol.* 10, 1982-1988, 1990.
262. Zhang, Y., Lin, J.-X. and Vilcek, J.: Interleukin-6 induction by tumor necrosis factor and interleukin-1 in human fibroblasts involves activation of a nuclear factor binding to a  $\kappa$ B-like sequence. *Mol. Cell. Biol.* 10, 3818-3823, 1990.
263. Lee, T.H., Lee, G.W., Ziff, E.B. and Vilcek, J.: Cloning and characterization of TNF-inducible genes in human fibroblasts. In: *Molecular Cellular Biology of Cytokines*. J.J. Oppenheim, M.C. Powanda, M.J. Kluger and C.A. Dinarello (eds.), pp. 397-402. Wiley-Liss, Inc., 1990.
264. Reis, L.F.L., Fujita, T., Lee, T.H., Taniguchi, T. and Vilcek, J.: TNF and IL-1 induce mRNAs for the transcription factors IRF-1 and IRF-2: Possible roles in the regulation of IFN- $\beta$  expression. In: *Molecular Cellular Biology of Cytokines*. J.J. Oppenheim, M.C. Powanda, M.J. Kluger and C.A. Dinarello (eds.), pp. 1-6. Wiley-Liss, Inc., 1990.
265. Gase, K., Korobko, V.G., Wisniewski, H.G., Le, J., Dobrynin, V.N., Filippov, S.A., Gutsche, W., Maksimova, Y.N., Schlott, B., Shingarova, L.N., Vilcek, J. and Behnke, D.: Critical role of the C-terminus in the biological activities of human tumor necrosis factor- $\alpha$ . *Immunology* 71, 368-371, 1990.
266. Vilcek, J. and Le, J.: Interferon- $\gamma$ . In: *Encyclopedia of Immunology*. I.M. Roitt and P.J. Delves (eds.), pp. 892-895. Academic Press, London, 1992.
267. Vilcek, J. and Le, J.: Immunology of cytokines: An introduction. In: *Cytokine Handbook*. A.W. Thomson (ed.), pp. 1-17. Academic Press Ltd., 1991.
268. Vilcek, J. and Palombella, V.J.: TNF as a growth factor. In: *Tumor Necrosis Factors: Structure, Function, and Mechanism of Action*. B.B. Aggarwal and J. Vilcek (eds.), pp. 269-287. Marcel Dekker, Inc., 1991.
269. Vilcek, J. and Lee, T.H.: Tumor necrosis factor. New insights into the molecular mechanisms of its multiple actions. *J. Biol. Chem.* 266, 7313-7316, 1991.
270. Wolchok, J.D. and Vilcek, J.: There is more to hemorrhagic necrosis than tumor necrosis factor. *J. Nat. Cancer Inst.* 83, 807-809, 1991.
271. Lee, T.H., Wisniewski, H.-G. and Vilcek, J.: A novel secretory tumor necrosis factor-inducible protein (TSG-6) is a member of the family of hyaluronate binding proteins, closely related to the adhesion receptor CD44. *J. Cell Biol.* 116, 545-557, 1992.
272. Reis, L.F.L., Harada, H., Wolchok, J.D., Taniguchi, T. and Vilcek, J.: Critical role of a common transcription factor, IRF-1, in the regulation of IFN- $\beta$  and IFN-inducible genes. *EMBO J.* 11, 185-193, 1992.

273. Liebes, L., Walsh, C.M., Chachoua, A., Oratz, R., Richards, D., Hochster, H., Peace, D., Marino, D., Alba, S., Le Sher, D., Blum, R.H. and Vilcek, J.: Modulation of monocyte functions by muramyl tripeptide phosphatidylethanolamine in a phase II study in patients with metastatic melanoma. *J. Nat. Cancer Inst.* 84, 694-699, 1992.
274. Wisniewski, H.-G., Lee, T.H., Lee, S. and Vilcek, J.: TSG-6: A TNF- and IL-1-inducible 39 kD hyaluronate binding protein with homology to the cartilage link protein family. In: *Pathophysiology and Pharmacology of Cytokines*. P. Ghezzi and A. Mantovani (eds.), pp. 149-155. Biomedical Press, Augusta, Georgia, 1992.
275. Sparacio, S.M., Zhang, Y., Vilcek, J. and Benveniste, E.N.: Cytokine regulation of interleukin-6 gene expression in astrocytes involves activation of an NF- $\kappa$ B-like nuclear protein. *J. Neuroimmunol.* 39, 231-242, 1992.
276. Wolchok, J.D. and Vilcek, J.: Induction of HLA class I mRNA by cytokines in human fibroblasts: comparison of TNF, IL-1 and IFN- $\beta$ . *Cytokine* 6, 520-527, 1992.
277. Oliveira, I.C., Sciavolino, P.J., Lee, T.H. and Vilcek, J.: Downregulation of interleukin 8 gene expression in human fibroblasts: Unique mechanism of transcriptional inhibition by interferon. *Proc. Nat. Acad. Sci. USA* 89, 9049-9053, 1992.
278. Sciavolino, P.J., Lee, T.H. and Vilcek, J.: Overexpression of metallothionein confers resistance to the cytotoxic effect of TNF with cadmium in MCF-7 breast carcinoma cells. *Lymphokine Cytokine Res.* 11, 265-270, 1992.
279. Huang, S., Hendriks, W., Althage, A., Hemmi, S., Bluethmann, H., Kamijo, R., Vilcek, J., Zinkernagel, R.M. and Aguet, M.: Immune response in mice that lack the interferon- $\gamma$  receptor. *Science* 259, 1742-1745, 1993.
280. Lee, T.H., Wisniewski, H.-G., Klampfer, L., Oppenheim, J.D. and Vilcek, J.: TSG-6: A novel secretory protein inducible by tumor necrosis factor or interleukin-1 in fibroblasts and mononuclear cells. In: *Tumor Necrosis Factor: Molecular and Cellular Biology and Clinical Relevance*. W. Fiers and W.A. Buurman (eds.), pp. 90-95. S. Karger, Basel, 1993.
281. Lee, G.W., Lee, T.H. and Vilcek, J.: TSG-14, a tumor necrosis factor- and IL-1-inducible protein, is a novel member of the pentaxin family of acute phase proteins. *J. Immunol.* 150, 1804-1812, 1993.
282. Lee, T.H., Klampfer, L., Shows, T.B. and Vilcek, J.: Transcriptional regulation of TSG6, a tumor necrosis factor- and interleukin-1-inducible primary response gene coding for a secreted hyaluronan-binding protein. *J. Biol. Chem.* 268, 6154-6160, 1993.
283. Wisniewski, H.-G., and Vilcek, J.: Role of cytokines in virus infections. In: *Zytokine. 22. Symposium der Gesellschaft für Fortschritte in der Inneren Medizin*. W. Wilmanns (ed.), pp. 27-33. Georg Thieme Verlag, Stuttgart, 1993.
284. Wolchok, J.D., Goodman, A.R., and Vilcek, J.: Activation of NF- $\kappa$ B may be necessary but is not sufficient for induction of H-2 antigens by TNF in J558L murine myeloma cells. *J. Leuk. Biol.* 55, 7-12, 1994.
285. Kamijo, R., Shapiro, D., Le, J., Huang, S., Aguet, M. and Vilcek, J.: Generation of nitric oxide and induction of major histocompatibility complex class II antigen in macrophages from mice lacking the interferon  $\gamma$  receptor. *Proc. Nat. Acad. Sci. USA* 90, 6626-6630, 1993.

286. Vietor, I., Schwenger, P., Li, W., Schlessinger, J., and Vilcek, J.: Tumor necrosis factor-induced activation and increased tyrosine phosphorylation of mitogen-activated protein (MAP) kinase in human fibroblasts. *J. Biol. Chem.* 268, 18994-18999, 1993.
287. Wisniewski, H.-G., Maier, R., Lotz, M., Lee, S., Klampfer, L., Lee, T.H. and Vilcek, J.: TSG-6: A TNF-, IL-1-, and LPS-inducible secreted glycoprotein associated with arthritis. *J. Immunol.* 151, 6593-6601, 1993.
288. Kamijo, R., Le, J., Shapiro, D., Havell, E.A., Huang, S., Aguet, M., Bosland, M. and Vilcek, J.: Mice that lack the interferon- $\gamma$  receptor have profoundly altered responses to infection with *Bacillus Calmette-Guérin* and subsequent challenge with lipopolysaccharide. *J. Exp. Med.* 178, 1435-1440, 1993.
289. Vilcek, J. and Le, J.: Immunology of cytokines: An introduction. In: *The Cytokine Handbook*, 2nd Edition. A.W. Thomson (ed.), pp. 1-19. Academic Press, London, 1994.
290. Chachoua, A., Oratz, R., Liebes, L., Alter, R.S., Felice, A., Peace, D., Vilcek, J., and Blum, R.H.: Phase Ib trial of granulocyte-macrophage colony-stimulating factor combined with murine monoclonal antibody R24 in patients with metastatic melanoma. *J. Immunother.* 16, 132-141, 1994.
291. Knight, D.M., Trinh, H., Le, J., Siegel, S., Shealy, D., McDonough, M., Scallon, B., Moore, M.A., Vilcek, J., Daddona, P. and Ghrayeb, J.: Construction and initial characterization of a mouse-human chimeric anti-TNF antibody. *Mol. Immunol.* 30, 1443-1453, 1993.
292. Vilcek, J.: Interferon Revisited. *Saibo Kogaku* 13, 5-10, 1994 (in Japanese).
293. Kamijo, R., Harada, H., Matsuyama, T., Bosland, M., Gerecitano, J., Shapiro, D., Le, J., Koh, S.I., Kimura, T., Green, S.J., Mak, T.W., Taniguchi, T. and Vilcek, J.: Requirement for transcription factor IRF-1 in NO synthase induction in macrophages. *Science* 263, 1612-1615, 1994.
294. Wisniewski, H.-G., Burgess, W.H., Oppenheim, J.D. and Vilcek, J.: TSG-6, an arthritis-associated hyaluronan binding protein, forms a stable complex with the serum protein inter- $\alpha$ -inhibitor. *Biochemistry* 33, 7423-7429, 1994.
295. Klampfer, L., Lee, T.H., Hsu, W., Vilcek, J. and Chen-Kiang, S.: NF-IL6 and AP-1 cooperatively modulate the activation of *TSG-6* gene by tumor necrosis factor alpha and interleukin-1. *Mol. Cell. Biol.* 14, 6561-6569, 1994.
296. Sciavolino, P.J., Lee, T.H. and Vilcek, J.: Interferon- $\beta$  induces metalloproteinase mRNA expression in human fibroblasts: Role of activator protein-1. *J. Biol. Chem.* 269, 21627-21634, 1994.
297. Oliveira, I.C., Mukaida, N., Matsushima, K. and Vilcek, J.: Transcriptional inhibition of the interleukin-8 gene by interferon is mediated by the NF- $\kappa$ B site. *Mol. Cell. Biol.* 14, 5300-5308, 1994.
298. Kamijo, R., Shapiro, D., Gerecitano, J., Le, J., Bosland, M. and Vilcek, J.: Biological functions of IFN- $\gamma$  and IFN- $\alpha/\beta$ : Lessons from studies in gene knockout mice. *Hokkaido J. Med. Sci.* 69: 1332-1338, 1994.
299. Vilcek, J. and Oliveira, I.C.: Recent progress in the elucidation of interferon-gamma actions: Molecular biology and biological functions. *Int. Arch. Allergy Immunol.* 104, 311-316, 1994.
300. Kimura, T., Nakayama, K., Penninger, J., Kitagawa, M., Harada, H., Matsuyama, T., Tanaka, N., Kamijo, R., Vilcek, J., Mak, T.W. and Taniguchi, T.: Involvement of the IRF-1 transcription factor in antiviral responses to interferons. *Science* 264, 1921-1924, 1994.

301. Vietor, I. and Vilcek, J.: Pathways of heat shock protein 28 phosphorylation by TNF in human fibroblasts. *Lymphokine Cytokine Res.* 13, 315-323, 1994.
302. Chachoua, A., Oratz, R., Hoogmoed, R., Caron, D., Peace, D., Liebes, L., Blum, R.H. and Vilcek, J.: Monocyte activation following systemic administration of granulocyte-macrophage colony-stimulating factor. *J. Immunother.* 15, 217-234, 1994.
303. Lee, G.W., Goodman, A.R., Lee, T.H. and Vilcek, J.: Relationship of TSG-14 protein to the pentraxin family of major acute phase proteins. *J. Immunol.* 153, 3700-3707, 1994.
304. Siegel, S.A., Shealy, D.J., Nakada, M.T., Le, J., Woulfe, D.S., Probert, L., Kollias, G., Ghrayeb, J., Vilcek, J. and Daddona, P.E.: The mouse/human chimeric monoclonal antibody cA2 neutralizes TNF *in vitro* and protects transgenic mice from cachexia and TNF lethality *in vivo*. *Cytokine* 7, 15-25, 1995.
305. Vilcek, J. and Sen, G.C.: Interferons and other cytokines. In: *Fields Virology*, Third Edition. B.N. Fields, D.M. Knipe, P.M. Howley, *et al.* (eds.), pp. 375-399. Lippincott - Raven Publishers, Philadelphia, 1996.
306. Klampfer, L., Chen-Kiang, S. and Vilcek, J.: Activation of the TSG-6 gene by NF-IL6 requires two adjacent NF-IL6 binding sites. *J. Biol. Chem.* 270, 3677-3682, 1995.
307. Sciavolino, P. and Vilcek, J.: Regulation of metallothionein gene expression by TNF- $\alpha$  and IFN- $\beta$  in human fibroblasts. *Cytokine* 7, 242-250, 1995.
308. Altmeyer, A., Klampfer, L., Goodman, A.R. and Vilcek, J.: Promoter structure and transcriptional activation of the murine TSG-14 gene encoding a tumor necrosis factor/interleukin-1-inducible pentraxin protein. *J. Biol. Chem.* 270, 25584-25590, 1995.
309. Vilcek, J., Gerecitano, J., Goodman, A.R., Bosland, M. and Kamijo, R.: Control of inducible nitric oxide synthase gene expression by interferon regulatory factor-1: Implications for host resistance to bacteria and viruses. In: *Symposium in Immunology V*. M.M. Eibl, C. Huber, H.H. Peter and U. Wahn (eds.), pp. 19-30. Springer-Verlag, Berlin, 1996.
310. Kamijo, R., Gerecitano, J., Shapiro, D., Green, S.J., Aguet, M., Le, J. and Vilcek, J.: Generation of nitric oxide and clearance of interferon- $\gamma$  after BCG infection are impaired in mice that lack the interferon- $\gamma$  receptor. *J. Inflam.* 46, 23-31, 1996.
311. Wisniewski, H.-G., Hua, J.-C., Poppers, D.M., Naime, D., Vilcek, J. and Cronstein, B.N.: TNF/IL-1-inducible protein TSG-6 potentiates plasmin inhibition by inter- $\alpha$ -inhibitor and exerts a strong anti-inflammatory effect *in vivo*. *J. Immunol.* 156, 1609-1615, 1996.
312. Maier, R., Wisniewski, H.-G., Vilcek, J. and Lotz, M.: TSG-6 expression in human articular chondrocytes. Possible implications in joint inflammation and cartilage degradation. *Arthritis Rheum.* 39, 552-559, 1996.
313. Vietor, I., Oliveira, I.C. and Vilcek, J.: CCAAT box enhancer binding protein  $\alpha$  (C/EBP- $\alpha$ ) stimulates  $\kappa$ B element-mediated transcription in transfected cells. *J. Biol. Chem.* 271, 5595-5602, 1996.
314. Schwenger, P., Skolnik, E.Y. and Vilcek, J.: Inhibition of tumor necrosis factor-induced p42/p44 mitogen-activated protein kinase activation by sodium salicylate. *J. Biol. Chem.* 271, 8089-8094, 1996.
315. Vilcek, J.: Cytokines in 1995. *Cytokine & Growth Factor Rev.* 7, 103-106, 1996.

316. Goodman, A.R., Cardozo, T., Abagyan, R., Altmeyer, A., Wisniewski, H.-G. and Vilcek, J.: Long pentraxins: an emerging group of proteins with diverse functions. *Cytokine & Growth Factor Rev.* 7, 191-202, 1996.
317. Vilcek, J. and Le, J.: Interferon  $\gamma$ . In: *Encyclopedia of Immunology*, 2nd Edition. I.M. Roitt and P.J. Delves (eds.), pp. 1421-1426. Academic Press, London, 1998.
318. Vilcek, J., Aguet, M. and Reis, L.F.L.: Knockouts of interferons, interferon receptors and interferon signaling components. In: *Contemporary Immunology: Cytokine Knockouts*. S.K. Durum and K. Muegge (eds.), pp. 207-225. Humana Press Inc., Totowa, N.J., 1997.
319. Schwenger, P., Bellosta, P., Vietor, I., Basilico, C., Skolnik, E.Y. and Vilcek, J.: Sodium salicylate induces apoptosis via p38 mitogen-activated protein kinase but inhibits tumor necrosis factor-induced c-Jun N-terminal kinase/stress-activated protein kinase activation. *Proc. Nat. Acad. Sci. USA* 94, 2869-2873, 1997.
320. Wisniewski, H.-G. and Vilcek, J.: TSG-6: An IL-1/TNF-inducible protein with anti-inflammatory activity. *Cytokine & Growth Factor Rev.* 8, 143-156, 1997.
321. Vilcek, J.: The Cytokines: An overview. In: *The Cytokine Handbook*, 3rd Edition. A.W. Thomson (ed.), pp. 1-20. Academic Press, London, 1998.
322. Schwenger, P., Alpert, D., Skolnik, E.Y. and Vilcek, J.: Activation of p38 mitogen-activated protein kinase by sodium salicylate leads to inhibition of tumor necrosis factor-induced  $\text{I}\kappa\text{B}\alpha$  phosphorylation and degradation. *Mol. Cell. Biol.* 18, 78-84, 1998.
323. Krakauer, T., Vilcek, J. and Oppenheim, J.J.: Proinflammatory cytokines: TNF and IL-1 families, chemokines, TGF $\beta$  and others. In: *Fundamental Immunology*, 4th Edition. W.E. Paul (ed.), Chapter 22, pp. 775-811. Lippincott-Raven Press, New York, 1999.
324. Schwenger, P., Alpert, D., Skolnik, E.Y. and Vilcek, J.: Cell-type-specific activation of c-Jun N-terminal kinase by salicylates. *J. Cell. Physiol.* 179, 109-114, 1999.
325. Gerecitano, J., Perle, M.A. and Vilcek, J.: Transcriptional basis for the differences in inducible nitric oxide synthase (iNOS) expression between nonmetastatic and metastatic murine melanoma cell lines. *J. Interferon Cytokine Res.* 19, 393-405, 1999.
326. Alpert, D., Schwenger, P., Han, J. and Vilcek, J.: Cell stress and MKK6b-mediated p38 MAP kinase activation inhibit tumor necrosis factor-induced  $\text{I}\kappa\text{B}$  phosphorylation and NF- $\kappa\text{B}$  activation. *J. Biol. Chem.* 274, 22176-22183, 1999.
327. Goodman, A.R., Levy, D.E., Reis, L.F.L. and Vilcek, J.: Differential regulation of TSG-14 expression in murine fibroblasts and peritoneal macrophages. *J. Leukoc. Biol.* 67, 387-395, 2000.
328. Vilcek, J.: Cytokines engaged in antiviral action, macrophage activation, angiogenesis and regulation of cell growth and differentiation. In: *Cytokine Reference*. J.J. Oppenheim and M. Feldmann (eds.), Volume I, pp. 615-625. Academic Press, San Diego, 2000.
329. Alpert, D. and Vilcek, J.: Inhibition of  $\text{I}\kappa\text{B}$  kinase activity by sodium salicylate *in vitro* does not reflect its inhibitory mechanism in intact cells. *J. Biol. Chem.* 275, 10925-10929, 2000.

330. Poppers, D.M., Schwenger, P., and Vilcek, J.: Persistent tumor necrosis factor signaling in normal human fibroblasts prevents the complete resynthesis of  $\text{I}\kappa\text{B-}\alpha$ . *J. Biol. Chem.* 275, 29587-29593, 2000.
331. Mindrescu, C., Thorbecke, G.J., Klein, M.J., Vilcek, J., and Wisniewski, H.-G.: Amelioration of collagen-induced arthritis in DBA/1J mice by recombinant TSG-6, a tumor necrosis factor/interleukin-1-inducible protein. *Arthritis Rheum.* 43, 2668-2677, 2000.
332. Dias, A.A.M., Goodman, A.R., Lima Dos Santos, J., Novaes Gomes, R., Altmeyer, A., Bozza, P.T. de Fátima Horta, M., Vilcek, J., and Reis, L.F.L. TSG-14 transgenic mice have improved survival to endotoxemia and to CLP-induced sepsis. *J. Leuk. Biol.* 69, 928-936, 2001.
333. Ahn, J.-H., Park, S.-M., Cho, H.-S., Lee, M.-S., Yoon, J.-B., Vilcek, J., Lee, T. H.: Non-apoptotic signaling pathways activated by soluble Fas ligand in serum-starved human fibroblasts: Mitogen-activated protein kinases and NF- $\kappa$ B-dependent gene expression. *J. Biol. Chem.* 276, 47100-47106, 2001
334. Vilcek, J.: Novel interferons. *Nature Immunol.* 4, 8-9. 2003
335. Vilcek, J.: The cytokines: An overview. In: *The Cytokine Handbook*, Fourth Ed. M. Lotze and A.W. Thompson (eds.), Volume I, pp. 3-18. Academic Press, Amsterdam, 2003
336. Vilcek, J.: Boosting p53 with interferon and viruses. *Nature Immunol.* 4, 825-826, 2003
337. Wolchok J.D., Vilcek J.: Reassessing the usual suspects causing a commotion in the blood (and vessels?). *Cancer Biol. Ther.* 3, 124-125, 2004
338. Vilcek, J.: The early days of interferon research in Bratislava.. *Rheumatologia* 18, 1-4, 2004
339. Vilcek, J., Feldmann, M.: Cytokines as therapeutics and targets of therapeutics. *Trends Pharmacol. Sci.* 25, 201-209, 2004
340. Wisniewski, H.-G., Vilcek, J.: Cytokine-induced gene expression at the crossroads of innate immunity, inflammation and fertility: TSG-6 and PTX3/TSG-14. *Cytokine Growth Factor Rev.* 15, 129-146, 2004
341. Vilcek, J.: Why are rabbits uniquely sensitive to myxoma virus? *Cherchez l'interferon!* *Nature Immunol.* 5 (in press)
342. Szatmary, Z., Garabedian, M.J., Vilcek, J.: Inhibition of glucocorticoid receptor-mediated transcriptional activation by p38 mitogen-activated protein (MAP) kinase. *J. Biol. Chem.* 279, 43708-43715, 2004
343. Vilcek, J.: Cytokines: Wherefrom and Whereto. In: *Cytokines and the CNS*, Second Edition. R.M. Ransohoff and E.N. Benveniste (eds.). CRC Press (in press)
344. Wisniewski, H.-G., Snitkin, E. S., Mindrescu, C., Vilcek, J.: TSG-6 protein binding to glycosaminoglycans: Formation of stable complexes with hyaluronan and binding to chondroitin sulfate. Submitted for publication.